QC
983
A29

MAY 14 '45

VOLUME 73 [W. B. No. 1431] NUMBER 2

UNITED STATES DEPARTMENT OF COMMERCE
HENRY A. WALLACE, *Secretary*
WEATHER BUREAU - - F. W. Reichelderfer, *Chief*

MONTHLY WEATHER REVIEW

FEBRUARY 1945

CONTENTS

	Page
METEOROLOGICAL AND CLIMATOLOGICAL DATA:	
Aerological observations	23
River Stages, and Floods	28
Climatological Data	32
SOLAR RADIATION AND SUNSPOT DATA:	
Solar Radiation Observations	37
SOLAR RADIATION AND SUNSPOT DATA—Continued.	
Positions, Areas, and Counts of Sunspots	38
Provisional Relative Sunspot Numbers for December 1944 and January 1945	39
CHARTS I–XI.	

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C. - - See page 4 of cover for prices

MONTHLY WEATHER REVIEW

Editor, EDGAR W. WOOLARD

VOL. 73, No. 2
W. B. No. 1431

FEBRUARY 1945

CLOSED APRIL 5, 1945
ISSUED MAY 5, 1945

METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR FEBRUARY 1945

AEROLOGICAL OBSERVATIONS

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during February 1945.*

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albany, N. Y. (86 m.)				Albuquerque, N. Mex. (1620 m.)				Apalachicola, Fla. (5 m.)				Atlanta, Ga. (300 m.)				Big Spring, Tex. (774 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho. (868 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	27	1,007	−4.4	82	28	836	6.7	44	28	1,020	14.1	86	27	985	8.0	75	28	926	9.4	57	27	956	−8.6	88	28	917	3.2	73
500	27	956	−5.3	82					28	963	14.2	68	27	962	8.4	69												
1,000	27	898	−7.6	84					28	907	12.8	58	27	905	7.2	71	28	902	10.4	52	27	897	−7.4	76	28	902	3.9	66
1,500	27	840	−8.3	75					28	854	10.4	55	27	852	6.0	64	28	849	9.1	47	27	841	−7.8	65	28	848	1.3	62
2,000	27	788	−9.8		28	797	5.2	45	28	804	8.1	51	27	801	4.3	58	28	799	7.4	38	27	788	−9.2	59	28	796	−2.3	68
2,500	27	738	−11.0		28	750	1.6	50	28	757	5.7	48	27	754	2.2	54	28	752	4.9	34	27	739	−11.5	63	28	748	−5.7	66
3,000	27	691	−12.7		28	704	−2.2	54	28	712	3.3	45	27	708	−0.3	53	28	706	1.7	33	27	692	−14.5	61	28	701	−8.9	69
4,000	27	605	−17.6		27	620	−8.5	49	27	629	−0.7		27	624	−5.0	46	28	623	−4.0		26	606	−19.8	55	28	616	−14.1	63
5,000	27	529	−23.3		27	544	−14.7		27	554	−6.4		27	549	−10.5		27	549	−10.5		26	529	−26.4		28	539	−20.8	65
6,000	27	461	−29.8		27	476	−21.6		27	486	−13.3		26	481	−17.2		27	481	−17.7		26	460	−32.8		28	470	−27.4	
7,000	27	400	−36.1		25	415	−29.0		25	426	−20.2		26	421	−24.5		26	420	−25.0		26	398	−39.2		28	408	−34.3	
8,000	27	345	−42.8		25	360	−36.2		25	372	−27.6		26	366	−32.0		26	366	−32.3		26	342	−46.1		28	353	−41.5	
9,000	27	297	−49.1		24	311	−43.1		24	323	−35.4		26	317	−39.5		26	316	−39.4		25	294	−51.5		23	303	−48.5	
10,000	27	255	−53.4		24	267	−49.9		22	279	−43.3		23	273	−46.5		25	273	−46.8		23	252	−54.7		21	259	−52.9	
11,000	23	217	−55.9		22	230	−56.1		20	240	−50.6		19	236	−53.3		25	234	−53.6		18	216	−54.2		18	222	−55.7	
12,000	20	185	−55.1		20	196	−59.4		18	205	−55.9		17	202	−57.9		23	200	−57.5		13	185	−52.3		12	188	−53.4	
13,000	18	158	−53.9		17	166	−58.8		17	175	−58.2		17	172	−59.6		21	170	−58.6		8	158	−52.8		7	161	−52.1	
14,000	13	135	−53.4		10	142	−60.1		14	149	−61.6		11	146	−60.5		16	146	−60.3		6	135	−54.6		6	139	−53.1	
15,000	8	116	−55.1						8	127	−65.2		6	124	−63.1		11	124	−62.7						5	119	−54.3	
16,000									6	108	−68.9						5	106	−64.8									

Altitude (meters) m. s. l.	Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)				Caribou, Maine (193 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Dodge City, Kans. (787 m.)				El Paso, Tex. (1,195 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	28	1,015	17.8	91	28	991	−3.5	86	25	992	−10.7	91	27	1,020	9.9	82	28	835	−0.2	68	28	925	0.7	83	27	880	12.1	34
500	28	958	17.0	76	28	957	−4.8	84	25	953	−9.8	86	27	962	11.3	66												
1,000	28	904	15.2	62	28	897	−6.7	85	25	894	−11.5	82	27	906	9.0	59					28	901	1.4	75				
1,500	28	852	13.6	51	28	842	−7.8	67	25	837	−12.8	75	27	853	7.0	59					28	847	1.0	66	27	849	12.6	29
2,000	28	802	11.8	41	28	788	−9.5	58	25	784	−14.5	70	27	802	5.2	55	28	795	−0.1	59	28	796	−0.2	56	27	799	8.7	32
2,500	28	756	10.0	29	28	740	−10.9	53	25	733	−16.2	64	27	755	2.9	53	28	747	−2.5	56	28	748	−1.4	49	27	752	5.3	34
3,000	28	711	7.1	26	28	692	−12.7	48	25	686	−18.7	64	27	709	0.7	50	28	701	−5.4	59	28	702	−4.0	45	27	707	1.3	38
4,000	28	629	0.6	28	28	607	−17.6		25	598	−23.5		26	626	−3.9	47	28	616	−12.3	69	28	618	−9.7	47	27	624	−5.1	35
5,000	28	554	−6.3		28	530	−23.2		24	522	−29.1		25	550	−9.1		28	540	−18.6	59	28	542	−16.1	49	27	548	−12.0	30
6,000	28	487	−13.4		26	462	−28.9		24	453	−34.7		25	483	−15.5		27	471	−25.8		28	474	−22.7		27	480	−18.9	
7,000	27	426	−21.1		26	401	−35.9		24	392	−41.3		20	422	−23.0		24	409	−33.5		28	412	−30.1		26	419	−26.2	
8,000	27	372	−28.6		25	346	−42.6		24	337	−47.3		19	368	−30.1		24	354	−40.7		28	357	−37.7		26	364	−33.5	
9,000	27	322	−36.3		22	298	−48.9		24	289	−52.7		17	319	−37.6		23	305	−48.1		27	308	−44.6		26	315	−40.4	
10,000	25	278	−43.9		20	255	−52.9		21	248	−54.1		15	276	−45.3		22	262	−54.3		27	265	−51.3		26	272	−47.8	
11,000	23	240	−50.8		15	218	−53.7		19	212	−52.4		13	237	−52.4		20	224	−58.2		25	227	−56.6		26	233	−54.3	
12,000	22	205	−56.6		10	186	−52.6		15	181	−53.1		10	202	−56.6		18	190	−57.3		24	194	−58.6		20	199	−57.2	
13,000	20	175	−59.3		8	160	−52.8		10	156	−50.8		8	172	−59.0		14	162	−56.9		19	165	−57.2		17	170	−58.5	
14,000	17	149	−63.1						7	135	−50.9		6	147	−58.7		9	139	−56.8		14	142	−56.5		11	145	−59.7	
15,000	11	126	−67.4																		8	120	−58.5		8	123	−62.1	
16,000																									5	105	−63.8	

Altitude (meters) m. s. l.	Ely, Nev. (1,908 m.)				Glasgow, Mont. (648 m.)				Grand Junction, Colo. (1,416 m.)				Great Falls, Mont. (1,128 m.)				Greensboro, N. C. (273 m.)				Hatteras, N. C. (3 m.)				Havana, Cuba[1] (51 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	28	808	−1.7	79	28	940	−7.1	78	27	857	3.9	61	27	886	−4.9	72	27	988	4.1	75	21	1,021	7.5	83				
500																	27	961	4.6	64	21	962	8.3	70				
1,000					28	898	−5.9	71									27	904	3.6	63	21	905	5.5	64				
1,500					28	842	−6.6	60	27	848	3.7	57	27	845	−5.1	67	27	850	1.8	63	21	851	3.7	60				
2,000	28	799	−1.3	73	28	790	−8.5	59	27	797	1.1	56	27	792	−6.4	65	27	798	0.5	59	21	800	1.6	58				
2,500	28	750	−3.5	67	28	741	−11.1	64	27	749	−2.5	62	27	743	−9.1	66	27	750	−1.6	59	21	752	−0.8	57				
3,000	28	704	−7.0	65	28	693	−14.0	69	27	703	−5.9	68	27	696	−12.2	71	27	704	−3.2	54	21	705	−3.3	66				
4,000	28	618	−12.0	59	27	607	−19.5	62	26	618	−12.4	67	27	610	−18.2		27	620	−8.4	50	21	621	−7.8					
5,000	28	542	−18.0		25	530	−26.1		26	541	−18.2		27	532	−24.9		26	544	−14.1	40	20	546	−13.0					
6,000	28	473	−25.3		24	460	−32.5		26	473	−24.6		27	463	−31.1		26	476	−20.8	44	20	478	−19.0					
7,000	28	412	−32.4		24	398	−38.6		26	411	−32.0		27	401	−37.7		26	415	−28.1		20	418	−25.8					
8,000	27	356	−39.7		22	344	−44.6		25	356	−39.5		26	347	−44.3		25	360	−35.1		17	363	−33.0					
9,000	25	307	−47.0		20	296	−50.8		25	307	−46.6		22	298	−50.2		23	312	−42.5		15	315	−40.4					
10,000	20	265	−53.3		17	252	−54.6		23	264	−52.8		20	256	−54.7		19	269	−49.6		11	274	−46.6					
11,000	14	228	−59.5		15	215	−53.2		21	226	−56.9		15	218	−56.5		16	230	−55.8		8	235	−53.9					
12,000	7	194	−63.1		11	183	−50.5		18	192	−56.6		11	187	−54.9		13	196	−60.3									
13,000					8	157	−51.0		15	163	−55.5		9	159	−53.8		9	166	−60.6									
14,000					6	135	−52.9		7	140	−55.9		6	135	−54.4		5	141	−59.8									

See footnote at end of table.

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during February 1945*—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Huntington, W. Va. (172 m.)				Int'l Falls, Minn. (343 m.)			Jackson, Miss. (97 m.)				Joliet, Ill. (178 m.)			Lake Charles, La. (5 m.)			Little Rock, Ark. (79 m.)			Louisville, Ky. (165 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	28	1000	1.4	75	28	975	−12.0	88	27	1007	10.7	80	28	998	−2.8	90	28	1018	13.7	84	28	1010	5.9	79	28	1001	1.9	77
500	28	960	1.2	70	28	955	−11.3	87	27	960	10.7	72	28	958	−3.2	83	28	961	12.9	73	28	959	5.5	74	28	960	−1.0	73
1,000	28	902	−1.0	71	28	895	−11.9	80	27	904	9.3	68	28	899	−4.0	74	28	905	11.9	64	38	902	5.0	73	28	902	−0.7	71
1,500	28	848	−2.0	62	28	839	−12.2	75	27	851	7.8	64	28	844	−4.0	61	28	852	10.0	59	28	849	4.8	66	28	847	−1.0	67
2,000	28	796	−3.4	65	28	786	−13.0	66	27	800	6.0	54	28	792	−5.4	58	28	802	8.0	51	28	797	3.0	61	28	795	−2.2	64
2,500	28	747	−5.0	69	28	736	−15.0	59	27	753	3.8	51	28	743	−7.4	57	28	755	5.3	47	28	750	0.9	59	28	747	−3.9	59
3,000	28	700	−6.8	62	28	688	−17.1	55	27	708	1.4	46	28	696	−9.6	53	28	710	3.3	37	28	704	−1.2	50	28	701	−6.0	52
4,000	28	616	−11.5	52	28	601	−23.1	----	27	625	−3.1	----	28	612	−14.8	----	28	627	−1.1	----	28	621	−6.3	44	26	616	−10.8	57
5,000	28	540	−16.7	----	28	524	−29.3	----	25	550	−9.0	----	28	535	−20.7	----	28	552	−7.7	----	28	546	−12.8	47	26	540	−16.5	60
6,000	28	472	−23.0	----	28	455	−35.0	----	24	482	−15.8	----	27	467	−26.7	----	26	485	−14.8	----	26	477	−19.6	----	26	472	−22.6	----
7,000	28	411	−29.8	----	28	393	−40.9	----	24	422	−23.1	----	26	406	−33.4	----	26	424	−22.0	----	26	417	−26.4	----	25	411	−30.1	----
8,000	28	357	−36.8	----	28	339	−46.5	----	24	367	−30.7	----	24	351	−40.2	----	25	370	−29.5	----	26	362	−33.9	----	23	357	−37.4	----
9,000	27	308	−44.4	----	28	291	−50.8	----	24	318	−38.3	----	24	302	−47.9	----	25	320	−37.1	----	26	313	−41.7	----	19	308	−44.2	----
10,000	24	265	−50.8	----	25	249	−52.9	----	24	274	−45.9	----	21	259	−53.7	----	24	277	−44.7	----	26	270	−49.6	----	18	265	−51.0	----
11,000	22	227	−56.3	----	22	213	−51.3	----	21	235	−53.1	----	16	222	−55.9	----	23	238	−51.8	----	23	232	−55.9	----	13	228	−56.7	----
12,000	20	194	−58.4	----	20	182	−50.5	----	20	201	−57.9	----	11	189	−54.7	----	22	204	−56.4	----	21	198	−58.4	----	8	193	−58.8	----
13,000	15	165	−58.3	----	16	156	−50.8	----	18	171	−58.6	----	7	162	−53.4	----	19	174	−58.2	----	15	168	−58.9	----	6	164	−57.3	----
14,000	9	142	−58.3	----	7	133	−50.4	----	14	145	−60.3	----	----	----	----	----	17	148	−61.1	----	11	144	−60.0	----	----	----	----	----
15,000	----	----	----	----	----	----	----	----	7	124	−63.2	----	----	----	----	----	9	126	−64.4	----	7	122	−61.5	----	----	----	----	----
16,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9	107	−68.4	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Mazatlan, Mexico (80 m.)				Medford, Oreg. (409 m.)			Merida, Mexico (27 m.)				Miami, Fla. (4 m.)			Nashville, Tenn. (180 m.)			North Platte, Nebr. (849 m.)			Oakland, Calif. (2 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	24	1,006	18.9	82	26	972	6.9	75	22	1,012	26.0	65	28	1,021	18.4	84	28	998	4.7	75	28	918	−2.2	84	28	1,019	11.7	76
500	24	959	20.7	44	26	961	6.9	72	22	959	23.2	66	28	964	17.5	77	28	960	3.2	73	----	----	----	----	28	960	10.0	65
1,000	24	905	19.7	30	26	904	4.6	69	22	906	19.9	66	28	909	14.9	66	28	902	2.2	72	28	900	−0.9	74	28	903	7.4	59
1,500	24	854	17.0	27	26	850	1.3	74	22	855	16.6	71	28	856	12.9	54	28	848	2.2	65	28	846	−2.0	66	28	850	5.2	52
2,000	24	805	13.8	25	26	798	−1.6	68	22	806	13.3	74	28	807	10.4	52	28	797	0.7	59	28	794	−3.1	61	28	799	2.7	48
2,500	24	758	10.5	29	26	750	−4.4	65	22	759	10.7	67	28	760	8.0	47	28	749	−1.2	55	28	745	−5.7	62	28	751	0.3	41
3,000	24	714	7.2	34	26	703	−7.0	63	22	715	9.8	----	28	714	5.8	37	28	703	−3.2	57	28	699	−8.0	62	28	705	−2.2	----
4,000	21	630	−0.1	----	25	618	−12.7	62	22	633	5.2	----	28	632	1.5	----	22	620	−8.6	50	28	614	−13.4	59	28	621	−8.6	----
5,000	21	556	−6.1	----	25	542	−18.6	57	20	559	−1.5	----	28	557	−4.4	----	21	544	−14.3	----	28	537	−20.3	59	28	545	−15.0	----
6,000	21	488	−12.6	----	24	472	−25.4	----	18	492	−9.0	----	28	490	−10.8	----	20	476	−20.9	----	28	469	−26.7	----	28	477	−21.6	----
7,000	19	428	−19.9	----	23	411	−32.1	----	18	432	−16.8	----	28	430	−17.9	----	20	415	−27.8	----	28	407	−33.6	----	28	416	−28.6	----
8,000	17	373	−27.5	----	20	356	−40.0	----	17	377	−24.6	----	28	376	−25.5	----	18	361	−34.8	----	28	352	−40.7	----	28	361	−35.5	----
9,000	16	324	−35.0	----	20	306	−46.9	----	17	328	−32.1	----	28	326	−33.2	----	17	315	−42.3	----	27	304	−47.3	----	26	312	−42.8	----
10,000	14	281	−42.4	----	19	263	−52.2	----	17	284	−39.3	----	26	283	−40.7	----	12	269	−49.6	----	27	260	−53.0	----	26	268	−49.8	----
11,000	11	242	−49.4	----	17	226	−57.4	----	17	245	−46.3	----	26	243	−48.0	----	10	230	−55.9	----	26	223	−56.0	----	25	230	−54.5	----
12,000	7	208	−55.6	----	14	192	−60.3	----	16	210	−51.9	----	25	208	−54.0	----	5	198	−59.6	----	20	190	−56.3	----	17	198	−58.3	----
13,000	----	----	----	----	11	163	−56.7	----	16	180	−56.6	----	23	178	−58.5	----	----	----	----	----	17	163	−54.8	----	8	168	−60.6	----
14,000	----	----	----	----	7	139	−55.5	----	15	153	−61.9	----	20	152	−63.4	----	----	----	----	----	10	139	−54.6	----	----	----	----	----
15,000	----	----	----	----	----	----	----	----	9	131	−67.1	----	14	129	−69.2	----	----	----	----	----	7	119	−56.7	----	----	----	----	----
16,000	----	----	----	----	----	----	----	----	----	----	----	----	6	108	−74.6	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Ogden, Utah (1,355 m.)				Oklahoma City, Okla. (391 m.)			Omaha, Nebr. (308 m.)				Phoenix, Ariz. (339 m.)			Pittsburgh, Pa. (382 m.)			Portland, Maine (20 m.)			Rapid City, S. Dak. (981 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	28	864	1.2	72	28	971	3.9	78	28	983	−1.2	80	28	975	12.6	56	28	974	−1.2	78	25	1014	−5.8	75	28	902	−5.0	79
500	----	----	----	----	28	958	4.2	74	28	960	−1.9	79	28	957	14.8	44	28	960	−1.4	77	25	955	−5.5	69	----	----	----	----
1,000	----	----	----	----	28	901	4.2	63	28	900	−3.4	77	28	902	12.1	41	28	901	−3.6	78	25	895	−7.8	72	28	900	−4.8	77
1,500	28	849	1.6	65	28	848	3.8	62	28	845	−3.9	71	28	849	8.5	45	28	845	−5.0	69	25	839	−9.6	70	28	845	−4.4	67
2,000	28	798	−1.4	66	28	796	3.3	57	28	793	−5.8	71	28	799	4.7	47	28	793	−5.8	60	25	786	−11.2	66	28	792	−5.9	66
2,500	28	749	−5.0	70	28	749	1.1	45	28	744	−6.8	63	28	751	1.3	48	28	744	−7.8	56	25	737	−12.7	64	28	744	−8.3	61
3,000	28	702	−8.1	68	28	703	−1.3	36	28	698	−8.9	54	28	706	−1.6	43	28	697	−9.8	55	25	690	−14.2	62	28	697	−11.3	62
4,000	28	617	−13.5	60	28	620	−6.6	----	27	613	−13.4	54	28	622	−7.9	39	28	612	−14.2	55	25	604	−19.1	63	27	671	−16.7	56
5,000	28	540	−19.2	66	28	545	−12.7	----	27	536	−19.6	61	28	546	−14.3	40	28	536	−19.7	----	23	527	−25.2	----	26	534	−23.5	----
6,000	28	472	−25.8	----	27	477	−19.7	----	27	468	−26.3	----	28	477	−21.0	----	28	468	−25.9	----	23	459	−31.2	----	25	465	−29.8	----
7,000	28	410	−33.2	----	27	416	−27.3	----	27	407	−33.1	----	27	417	−28.1	----	28	406	−32.4	----	22	397	−38.0	----	23	403	−37.1	----
8,000	28	354	−40.5	----	25	361	−34.7	----	27	352	−39.9	----	27	361	−35.6	----	28	352	−39.0	----	22	343	−44.2	----	22	348	−44.5	----
9,000	27	305	−47.1	----	25	312	−42.3	----	27	304	−46.8	----	27	312	−42.7	----	28	303	−45.6	----	20	294	−50.2	----	20	299	−50.3	----
10,000	26	262	−53.3	----	24	269	−50.0	----	27	261	−52.2	----	26	269	−49.7	----	28	261	−51.8	----	20	252	−53.3	----	19	256	−54.3	----
11,000	25	225	−57.6	----	23	231	−56.1	----	25	223	−56.8	----	25	230	−55.8	----	25	223	−56.0	----	16	215	−53.9	----	15	220	−55.9	----
12,000	22	192	−58.9	----	21	196	−58.9	----	19	191	−56.7	----	19	197	−60.2	----	20	190	−55.6	----	12	185	−53.5	----	13	187	−56.1	----
13,000	19	164	−58.8	----	16	167	−58.9	----	16	162	−55.1	----	11	168	−60.2	----	14	162	−54.3	----	10	158	−51.5	----	10	160	−54.3	----
14,000	14	140	−57.0	----	12	143	−59.4	----	10	139	−55.2	----	7	142	−58.1	----	10	138	−55.5	----	6	136	−51.9	----	5	137	−53.7	----
15,000	7	119	−57.7	----	5	122	−61.2	----	5	119	−56.5	----	5	121	−61.0	----	----	----	----	----	----	----	----	----	----	----	----	----

See footnote at end of table.

TABLE 1.—*Mean free-barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during February 1945*—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)				San Antonio, Tex. (240 m.)				San Juan, P. R. (15 m.)				Santa Maria, Calif. (71 m.)				S. Ste. Marie, Mich. (221 m.)				Spokane, Wash. (598 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	28	1,000	0.8	74	28	992	−7.2	81	28	988	12.6	81	28	1,017	23.4	80	28	1,010	10.7	83	28	990	−8.5	90	28	946	2.0	79
500	28	960	−2.6	73	28	958	−8.2	84	28	958	12.9	75	28	961	20.0	78	28	960	10.4	70	28	955	−8.4	90				
1,000	28	901	−1.3	68	28	898	−8.5	80	28	903	12.2	72	28	907	16.6	76	28	904	8.5	59	28	895	−10.0	83	28	900	0.5	76
1,500	28	847	−1.6	68	28	842	−9.0	70	28	851	10.8	62	28	855	13.6	73	28	850	6.1	52	28	839	−11.4	77	28	846	−2.4	77
2,000	28	795	−2.6	63	28	788	−10.2	61	28	801	9.4	46	28	805	10.5	68	28	800	4.2	39	28	786	−12.5	68	28	794	−5.6	80
2,500	28	746	−4.2	61	28	739	−11.4	58	28	754	7.6	33	28	758	8.7	51	28	752	1.5	34	28	736	−13.7	60	28	744	−8.3	79
3,000	28	700	−6.4	60	28	692	−13.6	59	28	709	4.9	32	28	714	7.9	----	28	706	−1.4	----	28	688	−15.6	----	28	698	−11.4	73
4,000	28	616	−11.7	57	27	606	−19.4	----	28	627	−1.4	29	28	632	4.2	----	28	622	−7.4	----	28	603	−20.4	----	28	611	−17.3	71
5,000	28	539	−17.4	53	27	529	−25.5	----	28	552	−7.9	----	28	558	−1.9	----	27	546	−14.0	----	28	526	−26.5	----	28	534	−23.5	----
6,000	28	472	−23.4	----	25	461	−31.4	----	28	485	−15.0	----	28	491	−8.7	----	27	478	−20.8	----	28	457	−32.9	----	28	466	−29.4	----
7,000	28	410	−30.8	----	24	399	−38.0	----	28	424	−22.0	----	28	432	−16.0	----	27	417	−27.7	----	28	395	−39.8	----	28	403	−36.0	----
8,000	28	355	−38.2	----	23	345	−44.8	----	28	369	−29.6	----	28	377	−23.2	----	27	362	−34.9	----	28	340	−46.3	----	28	349	−43.0	----
9,000	28	306	−45.5	----	22	296	−51.6	----	28	320	−37.4	----	28	328	−30.3	----	25	313	−42.0	----	26	293	−51.6	----	27	300	−49.6	----
10,000	28	264	−51.9	----	21	253	−56.3	----	28	276	−45.0	----	27	285	−38.1	----	25	270	−49.1	----	24	251	−54.0	----	25	257	−55.2	----
11,000	28	226	−56.6	----	19	216	−55.3	----	27	237	−52.0	----	27	246	−43.8	----	23	231	−55.1	----	19	215	−54.4	----	22	220	−56.9	----
12,000	23	193	−57.6	----	13	184	−53.6	----	26	203	−56.4	----	26	211	−50.6	----	21	196	−59.2	----	12	183	−50.5	----	17	188	−55.3	----
13,000	16	165	−56.6	----	13	158	−53.7	----	23	173	−58.5	----	24	180	−57.1	----	14	167	−58.3	----	8	156	−49.0	----	10	159	−53.4	----
14,000	9	142	−57.3	----	8	135	−53.3	----	22	148	−60.9	----	20	154	−62.6	----	8	142	−57.4	----	7	134	−50.2	----	5	137	−53.1	----
15,000	7	121	−59.3	----	5	116	−53.2	----	14	126	−63.6	----	13	130	−68.4	----												
16,000									9	107	−66.0	----																
17,000									5	90	−67.4	----																

Altitude (meters) m. s. l.	Swan Island, W. I. (10 m.)				Tacubaya, Mexico (2,306 m.)				Tampa, Fla. (3 m.)				Tatoosh Island, Wash. (31 m.)				Toledo, Ohio (191 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	28	1,016	24.7	80	28	774	16.4	44	28	1,021	16.9	80	28	1,013	6.7	81	28	996	−3.1	87	28	1,018	3.1	62
500	28	960	21.1	82	----	----	----	----	28	963	16.3	64	28	956	4.0	78	28	958	−3.3	84	28	960	1.1	59
1,000	28	907	17.8	75	----	----	----	----	28	909	14.3	56	28	899	0.9	78	28	899	−5.7	81	28	902	0.2	57
1,500	28	855	14.8	66	----	----	----	----	28	856	11.8	58	28	845	−1.8	76	28	844	−5.8	60	28	847	−1.0	54
2,000	28	805	11.9	61	----	----	----	----	28	806	9.1	55	28	793	−4.5	74	28	791	−6.7	49	28	795	−3.2	52
2,500	28	759	10.0	45	28	756	15.4	42	28	759	6.9	48	28	744	−7.2	68	28	742	−8.4	48	28	746	−5.2	52
3,000	28	714	9.0	30	28	713	11.9	44	28	713	4.5	37	28	697	−9.9	65	28	695	−10.8	50	28	700	−7.2	50
4,000	28	633	5.0	----	28	631	3.9	55	28	631	0.2	----	27	612	−15.7	62	28	610	−15.9	----	28	615	−12.6	51
5,000	28	559	−0.9	----	28	557	−3.7	54	28	556	−5.7	----	26	536	−22.4	----	27	534	−20.7	----	28	539	−18.2	----
6,000	28	492	−7.6	----	28	490	−9.9	----	27	488	−12.5	----	25	467	−28.6	----	27	466	−27.1	----	28	471	−24.3	----
7,000	28	432	−15.1	----	27	430	−16.8	----	27	428	−19.5	----	24	406	−35.0	----	26	404	−34.2	----	28	410	−31.1	----
8,000	28	378	−22.9	----	24	376	−24.3	----	26	373	−27.0	----	22	350	−42.2	----	24	350	−40.4	----	27	355	−38.0	----
9,000	28	329	−30.2	----	24	326	−32.0	----	26	324	−34.8	----	19	302	−48.4	----	23	301	−46.7	----	25	307	−44.6	----
10,000	28	286	−37.5	----	21	283	−39.7	----	21	280	−42.6	----	15	260	−54.8	----	19	259	−51.9	----	19	264	−50.7	----
11,000	28	246	−44.8	----	19	244	−46.6	----	15	242	−49.7	----	7	226	−59.2	----	15	223	−55.6	----	17	226	−56.5	----
12,000	27	212	−51.9	----	17	210	−52.6	----	15	207	−54.9	----					10	190	−55.2	----	14	193	−59.2	----
13,000	27	181	−58.6	----	9	180	−57.8	----	12	177	−57.9	----					7	163	−52.5	----	9	166	−57.1	----
14,000	25	154	−64.9	----	5	153	−62.0	----	10	151	−62.6	----					5	139	−54.1	----				
15,000	22	131	−70.4	----					7	128	−68.4	----												
16,000	8	111	−74.2	----																				

[1] Data not yet received.

NOTE.—All observations scheduled between 10 p. m. and midnight, E. S. T. (0300 and 0500, G. C. T.) except at Mazatlan and Merida, where they are taken near 9 p. m., E. S. T. (0200, G. C. T.).

"Number of observations" refers to pressure only. (In a few cases temperature or humidity data may be missing for one or more levels of some observations). Relative humidity data are not published for levels having a corresponding mean temperature below −20° C.

All relative humidity observations are obtained by electric hygrometer and have been adjusted to compensate for the values occurring below the operating range of the humidity element. For explanation of the adjustment see article entitled "Curve Method for Obtaining Monthly Means of Relative Humidity," page 241, MONTHLY WEATHER REVIEW, December 1944.

None of the means included in these tables are based on less than 15 surface or 5 standard level observations.

TABLE 2.—*Free-air resultant winds based on pilot-balloon observations made near 5 p. m., E. S. T (2200 G. C. T.) during February 1945. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°) Velocities in meters per second*

Altitude (meters) m. s. l.	Abilene, Tex. (534 m.)			Albuquerque, N. Mex. (1,630 m.)			Atlanta, Ga. (299 m.)			Billings, Mont. (1,095 m.)			Bismarck, N. Dak. (512 m.)			Boise, Idaho (868 m.)			Brownsville, Tex. (7 m.)			Buffalo, N. Y. (220 m.)			Burlington, Vt. (132 m.)			Charleston, S. C. (16 m.)			Cincinnati, Ohio (152 m.)			Denver, Colo. (1,627 m.)			El Paso, Tex. (1,196 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	24	191	2.7	28	248	1.8	21	256	2.0	25	250	2.2	28	278	3.6	27	306	1.1	25	149	4.3	23	248	4.5	27	245	1.2	22	209	1.7	26	267	1.4	28	2	2.1	27	256	2.5
500							21	265	2.6										25	159	5.1	23	243	6.8	27	240	3.0	22	223	4.2	26	235	3.3						
1,000	24	232	3.9				20	246	4.4				27	285	5.5	27	316	2.5	21	186	5.6	18	259	9.2	25	264	4.7	18	261	4.6	23	235	5.8						
1,500	21	256	6.1				18	256	6.9	25	259	6.7	22	296	8.7	27	296	2.9	17	221	4.0	12	258	9.2	23	276	7.1	17	276	7.1	21	263	7.4				27	256	3.8
2,000	21	268	8.4	28	223	3.1	15	262	9.3	24	274	8.1	21	300	10.3	25	282	5.6	14	273	6.0	10	280	10.4	17	287	8.8	15	274	9.8	16	278	7.2	28	347	1.9	27	257	4.5
2,500	20	263	9.5	27	244	4.3	12	272	12.0	23	281	10.0	19	301	11.7	20	285	5.5	14	268	8.2				16	285	10.8	13	280	11.5	15	276	10.2	23	300	3.0	27	268	6.0
3,000	19	267	10.0	27	270	6.1	10	273	13.7	22	285	12.3	17	298	12.2	16	291	5.5	13	262	9.9				12	295	13.9	12	279	13.5	14	286	13.1	21	284	6.3	26	271	9.4
4,000	17	274	13.3	23	264	11.7				17	298	11.9	17	300	15.4	410	313	5.4	13	255	13.7							10	275	20.0	10	277	18.1	19	279	11.6	23	262	11.8
5,000	15	277	15.7	20	261	16.1				14	311	15.0	13	307	13.2				13	256	15.6							10	273	24.0				18	292	15.6	21	262	13.6
6,000	12	279	19.3	19	263	18.5				13	319	15.3	12	305	14.7				13	254	21.0													18	286	16.9	15	258	16.2
8,000				14	273	20.8				10	331	21.6																											
10,000				10	283	23.4																																	

Altitude (meters) m. s. l.	Ely, Nev. (1,910 m.)			Grand Junction, Colo. (1,413 m.)			Greensboro, N. C. (271 m.)			Havre, Mont. (767 m.)			Jacksonville, Fla. (16 m.)			Joliet, Ill. (178 m.)			Las Vegas, Nev. (573 m.)			Little Rock, Ark. (88 m.)			Medford, Oreg. (410 m.)			Miami, Fla. (12 m.)			Mobile, Ala. (66 m.)			Nashville, Tenn. (194 m.)			New York, N. Y. (15 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	28	331	0.6	28	311	1.8	23	263	1.1	25	253	2.1	28	111	1.2	26	263	2.3	28	348	1.4	22	286	0.4	25	276	1.2	28	136	3.9	23	206	2.3	23	228	1.0	24	291	3.5
500							23	267	2.3				28	226	2.7	26	258	3.6				22	244	0.6	25	267	0.9	28	138	3.9	23	212	5.0	23	211	0.8	24	296	3.9
1,000							21	268	3.6	25	259	5.3	26	245	4.7	21	276	5.7	28	320	0.3	16	216	4.6	25	233	1.8	27	156	2.1	18	234	7.0	19	201	2.9	24	297	6.1
1,500				28	306	1.6	21	274	6.2	25	274	8.5	23	260	8.1	17	278	7.4	27	293	1.5	15	241	6.3	24	239	2.5	23	250	1.7	14	254	7.2	15	228	4.9	24	293	9.6
2,000	28	345	0.7	28	276	1.1	21	272	10.0	23	284	9.7	23	259	10.5	15	277	9.2	26	296	3.5	12	266	9.1	21	257	3.0	19	279	2.8	12	259	8.8	12	254	8.7	17	293	10.3
2,500	28	316	1.6	28	266	2.3	18	281	14.2	23	290	9.4	21	260	12.5	14	280	10.6	24	290	4.3	11	267	11.4	17	315	4.2	19	280	3.7	10	274	11.7	12	266	10.1	14	293	12.2
3,000	25	294	2.5	25	252	4.7	18	281	16.1	22	294	10.7	17	263	14.2	12	281	14.0	21	296	4.6				13	338	6.2	18	285	4.7				10	280	12.1			
4,000	19	301	7.6	16	273	8.4	13	288	19.7	16	297	10.5	16	267	15.6				19	307	7.9				11	333	12.0	19	269	7.8									
5,000	15	303	12.5				11	286	24.3	12	296	12.2	15	274	18.4				16	313	12.8				11	319	15.2	19	270	10.2									
6,000	12	323	13.6										13	271	22.8				16	318	15.2							18	275	12.8									
8,000																												14	271	16.0									
10,000																												11	261	19.9									

Altitude (meters) m. s. l.	Oakland, Calif. (8 m.)			Oklahoma City, Okla. (396 m.)			Omaha, Nebr. (306 m.)			Phoenix, Ariz. (338 m.)			Rapid City, S. Dak. (982 m.)			St. Louis, Mo. (181 m.)			St. Paul, Minn. (225 m.)			San Antonio, Tex. (240 m.)			San Diego, Calif. (15 m.)			Sault Ste. Marie, Mich. (225 m.)			Seattle, Wash. (116 m.)			Spokane, Wash. (603 m.)			Washington, D. C. (24 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	28	254	2.8	20	281	1.0	25	269	2.0	28	257	1.3	27	354	2.4	26	248	1.6	26	250	1.6	23	269	0.2	25	273	3.4	27	273	1.8	26	194	1.5	28	227	2.4	25	298	2.8
500	28	297	3.1	20	300	1.0	25	248	1.9	28	258	1.5				26	245	2.8	26	254	2.5	23	204	0.8	25	297	2.7	27	269	2.5	26	196	3.2				25	279	4.7
1,000	26	342	3.2	19	288	1.4	23	268	4.1	28	250	1.4	27	353	2.5	24	249	5.5	24	272	5.2	21	207	2.8	21	319	2.6	21	276	3.6	21	213	5.7	28	228	4.1	23	266	7.8
1,500	24	340	5.9	15	256	5.0	15	272	8.6	28	244	1.8	27	318	4.9	21	258	7.1	19	275	6.4	18	248	4.6	19	339	4.2	14	290	4.5	19	219	5.4	22	243	6.2	22	284	10.5
2,000	24	334	6.8	14	275	5.7	14	277	11.5	27	245	2.7	23	304	7.3	19	276	9.6	18	273	7.8	15	274	7.7	17	338	5.3	12	296	5.8	14	248	5.8	16	253	7.7	20	294	11.8
2,500	22	335	7.3	14	262	7.3	13	278	12.9	26	256	3.5	21	300	9.2	16	280	11.7	15	277	11.4	14	272	11.2	16	328	6.6							10	293	5.4	20	289	14.8
3,000	22	331	9.4	12	278	11.0	11	285	13.5	26	261	5.6	16	296	11.9	15	271	13.4	14	279	13.4	13	264	12.2	15	325	7.7										19	292	17.5
4,000	19	325	12.5	12	277	16.2				25	264	8.5	13	292	13.8	13	274	20.5	11	285	15.7	13	271	16.2	15	318	9.3										18	290	19.7
5,000	14	330	14.9	12	286	18.9				23	273	10.3	10	294	15.7	10	279	26.1	10	283	17.2	13	267	17.5	14	308	12.4										13	284	25.1
6,000	11	331	20.0	11	287	24.2				19	296	12.4										10	277	18.2	10	320	14.4										11	285	30.9
8,000										13	292	19.2																											

TABLE 3.—*Maximum free air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during February 1945*

Section	Surface to 2,500 meters (m. s. l.)					Above 2,500 to 5,000 meters (m. s. l.)					Above 5,000 meters (m. s. l.)				
	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station
Northeast [1]	43.4	WNW.	2,500	16	Boston, Mass.	61.6	W.	4,690	16	Boston, Mass.	74.5	WNW.	8,212	25	Portland, Maine.
East-Central [2]	44.5	SW.	2,500	22	Knoxville, Tenn.	61.2	WSW.	3,270	20	Knoxville, Tenn.	73.6	W.	9,737	24	Huntington, W. Va.
						44.0	NW.	2,988	1	Birmingham, Ala.					
Southeast [3]	40.8	SW.	996	13	Charleston, S. C.	44.0	SW.	3,316	13	Charleston, S. C.	61.5	WNW.	13,987	19	Miami, Fla.
North-Central [4]	48.2	WSW.	2,500	26	Alpena, Mich.	55.2	WSW.	4,943	26	Madison, Wis.	73.2	WSW.	6,023	26	Madison, Wis.
Central [5]	44.5	NNW.	2,020	7	North Platte, Nebr.	43.2	WNW.	3,925	10	Kansas City, Mo.	83.0	W.	10,672	24	Indianapolis, Ind.
											60.0	WSW.	7,611	27	Big Spring, Tex.
South-Central [6]	37.6	SW.	2,276	6	Tulsa, Okla.	54.8	WSW.	5,000	21	San Antonio, Tex.	60.0	SW.	12,192	6	Brownsville, Tex.
Northwest [7]	45.4	WSW.	1,379	8	Havre, Mont.	50.4	NNE.	5,000	27	Tatoosh Is., Wash.	64.8	NNE.	9,102	25	Burns, Oreg.
West-Central [8]	38.6	WNW.	2,489	8	Cheyenne, Wyo.	50.5	NNW.	5,000	20	Reno, Nev.	72.5	NNW.	10,502	9	Oakland, Calif.
Southwest [9]	53.9	NNW.	2,180	12	Sandberg, Calif.	72.4	N.	4,443	21	Las Vegas, Nev.	79.8	N.	9,949	21	Winslow, Ariz.

[1] Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, and northern Ohio.
[2] Delaware, Maryland, Virginia, West Virginia, southern Ohio, Kentucky, eastern Tennessee, and North Carolina.
[3] South Carolina, Georgia, Florida, and Alabama.
[4] Michigan, Wisconsin, Minnesota, North Dakota, and South Dakota.
[5] Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri.
[6] Mississippi, Arkansas, Louisiana, Oklahoma, Texas (except El Paso), and western Tennessee.
[7] Montana, Idaho, Washington, and Oregon.
[8] Wyoming, Colorado, Utah, northern Nevada, and northern California.
[9] Southern California, southern Nevada, Arizona, New Mexico, and extreme west Texas.

LATE REPORT FOR JANUARY 1945

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent obtained by radiosondes during January 1945*

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Swan Island, W. I. (10 m.)				Altitude (meters) m. s.	Swan Island, W. I. (10 m.)			
	Number of observations	Pressure	Temperature	Relative humidity		Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,016	24.1	79	7,000	31	431	−15.4	
500	31	960	20.6	81	8,000	31	377	−22.9	
1,000	31	906	17.3	75	9,000	31	328	−30.3	
1,500	31	855	14.5	67	10,000	31	284	−38.1	
2,000	31	806	12.1	57	11,000	31	245	−46.0	
2,500	31	758	9.8	55	12,000	31	211	−53.3	
3,000	31	714	8.7		13,000	30	180	−59.3	
4,000	31	632	4.1		14,000	23	154	−63.2	
5,000	31	558	−1.6		15,000	9	130	−68.1	
6,000	31	492	−8.2						

REVISED DATA FOR SWAN ISLAND, WEST INDIES

Raob temperature data for Swan Island, W. I., for the period September 1940 through November 1942, published in the MONTHLY WEATHER REVIEW, were too low in the upper levels due to a drift in the calibration of the radiosonde recorder. These data have accordingly been recomputed and the revised data are shown in the following tables.

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent obtained by radiosondes.*

MONTHS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m.s.l.	September, 1940 (10 m.)				October, 1940 (10 m.)				November, 1940 (10 m.)				December, 1940 (10 m.)				January, 1941 (10 m.)				February, 1941 (10 m.)				March, 1941 (10 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,010	27.0	86	30	1,011	26.1	82	28	1,012	25.6	83	31	1,012	25.6	80	31	1,014	24.4	80	28	1,013	24.5	78	31	1,013	24.8	76
500	30	955	24.1	85	30	956	23.6	84	28	958	23.1	83	31	957	22.8	82	31	959	21.4	83	28	957	20.9	86	31	958	21.1	83
1,000	30	902	21.3	82	30	904	20.3	85	28	904	20.0	84	31	904	20.0	82	31	905	18.2	80	28	904	18.0	83	31	904	18.0	79
1,500	30	852	18.6	79	30	853	17.6	82	28	853	16.9	78	31	853	17.1	79	31	854	15.3	75	28	852	15.2	77	31	853	15.7	68
2,000	30	803	16.1	77	30	804	15.2	83	28	804	14.4	73	31	804	14.6	73	31	804	12.8	70	28	803	13.0	71	31	804	14.0	60
2,500	30	757	13.9	73	30	758	13.4	79	28	758	12.1	68	31	758	12.5	63	31	758	11.1	64	28	757	11.6	59	31	757	11.9	56
3,000	30	713	11.5	69	30	714	11.1	73	28	714	9.7	60	31	714	9.8	57	31	714	8.7	56	28	712	9.8	49	31	713	9.8	50
4,000	30	633	6.1	66	28	633	6.1	66	28	633	5.4	53	30	633	4.8	43	30	632	4.4	40	28	631	4.8	35	31	632	5.6	40
5,000	29	560	0.0	69	28	560	0.0	61	26	559	0.0	44	30	559	−1.1	35	30	559	−1.3	34	27	558	−0.6	30	31	559	−0.2	34
6,000	29	493	−5.5	67	28	494	−4.9	57	26	493	−6.0	38	30	492	−7.6	36	30	492	−7.9	33	27	491	−6.8	27	31	492	−6.7	29
7,000	29	434	−11.2	66	28	434	−10.8	53	26	433	−12.3	35	30	432	−14.2	34	30	432	−15.0	31	27	432	−13.5	25	31	432	−12.6	28
8,000	28	380	−16.9	64	28	380	−17.4	49	26	379	−18.6	33	30	378	−20.2	34	30	378	−21.3	30	27	378	−20.1	24	31	378	−19.3	27
9,000	28	332	−23.6	62	28	331	−24.4	47	25	331	−25.1	32	30	329	−27.6	35	30	328	−28.0	29	27	329	−27.1	23	31	330	−26.7	26
10,000	28	289	−31.0	60	27	288	−32.1	46	24	288	−32.9	30	30	286	−35.2	34	29	286	−34.7	28	27	286	−33.9	23	31	287	−33.7	25
11,000	27	250	−39.2	61	27	250	−40.1	47	24	249	−40.9	27	30	248	−42.8		29	247	−42.5		27	247	−41.6		29	248	−41.3	
12,000	27	216	−47.0		27	215	−47.8		23	215	−48.5		30	213	−50.0		29	213	−49.4		27	213	−48.9		29	214	−48.9	
13,000	25	185	−54.3		27	184	−54.9		23	184	−55.9		30	182	−56.5		29	182	−56.2		27	182	−56.2		29	183	−56.2	
14,000	25	158	−61.0		27	157	−62.0		23	157	−62.1		29	155	−62.0		29	155	−62.8		27	155	−63.4		28	156	−62.9	
15,000	24	134	−66.9		26	133	−68.0		23	134	−67.1		29	132	−67.0		28	132	−69.4		26	132	−70.2		26	133	−68.6	
16,000	24	114	−71.0		25	113	−72.2		21	113	−70.1		29	112	−71.1		28	111	−74.5		26	111	−76.4		26	112	−73.5	
17,000	24	96	−72.1		24	95	−73.4		20	95	−71.8		28	94	−74.1		27	94	−76.9		24	93	−78.6		24	94	−75.9	
18,000	21	81	−70.1		22	81	−71.0		18	80	−72.5		24	80	−74.3		26	79	−75.0		19	78	−74.6		21	80	−73.2	
19,000	18	68	−66.6		17	68	−67.5		15	68	−69.3		20	67	−70.5		20	67	−70.0		11	66	−69.3		17	67	−69.4	
20,000	12	58	−63.8		17	58	−63.8		14	58	−66.1		15	57	−65.6		16	57	−64.9		5	57	−66.8		13	57	−66.1	
21,000	11	49	−61.0		14	49	−60.1		13	49	−64.0		10	48	−62.8		7	48	−62.2						7	48	−63.2	
22,000	5	42	−59.9		8	42	−59.8		9	42	−61.3		6	42	−60.2										6	41	−60.5	
23,000									6	36	−60.0																	

Altitude (meters) m.s.l.	April, 1941 (10 m.)				May, 1941 (10 m.)				June, 1941 (10 m.)				July, 1941 (10 m.)				August, 1941 (10 m.)				September, 1941 (10 m.)				October, 1941 (10 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,011	26.3	81	30	1,010	26.4	84	30	1,013	27.3	84	31	1,013	27.0	84	31	1,013	27.1	84	31	1,010	27.8	82	31	1,012	27.1	83
500	30	956	22.6	85	30	956	23.4	88	30	958	24.2	88	31	958	24.1	87	31	958	24.3	87	31	956	24.6	88	31	958	24.1	90
1,000	30	903	20.3	82	30	903	20.4	84	30	905	21.1	84	31	906	21.5	81	31	905	21.6	80	31	903	21.9	82	31	905	21.3	84
1,500	30	852	18.1	68	30	852	17.9	78	30	854	18.3	78	31	855	18.7	74	31	854	18.8	75	31	852	19.2	78	31	854	18.6	76
2,000	30	803	15.5	59	30	803	15.5	71	30	805	16.1	66	31	806	16.1	65	31	806	16.2	71	31	804	16.7	72	31	805	16.1	73
2,500	30	757	12.7	52	30	757	13.2	67	30	759	13.9	54	31	760	13.6	56	31	759	13.6	66	31	758	14.1	69	31	759	13.5	70
3,000	30	713	10.7	44	30	713	10.7	64	30	716	11.1	49	31	716	10.7	50	31	716	10.9	61	31	714	11.3	65	31	715	11.0	65
4,000	30	632	5.5	35	29	632	5.7	68	30	634	5.3	47	31	634	5.1	47	31	634	4.8	60	30	633	5.9	60	31	634	5.9	61
5,000	30	559	−0.4	33	28	559	0.2	67	30	561	−0.3	40	31	561	−0.6	45	30	560	−1.1	56	30	560	0.4	57	31	561	0.8	56
6,000	30	492	−6.0	33	28	493	−5.8	63	29	494	−6.7	40	31	494	−6.9	46	30	493	−6.9	52	29	494	−5.5	58	30	494	−4.7	52
7,000	30	433	−12.8	34	26	434	−11.9	58	29	434	−12.8	36	31	434	−13.0	46	30	434	−13.4	51	29	434	−11.2	56	30	435	−10.5	51
8,000	30	379	−19.2	34	25	379	−18.1	56	29	380	−18.9	35	31	379	−18.8	44	30	380	−19.6	50	28	380	−16.9	52	30	381	−16.5	47
9,000	30	330	−25.9	34	24	330	−25.2	55	27	331	−25.7	33	31	330	−25.7	40	30	331	−26.3	48	28	332	−23.4	48	30	333	−23.1	45
10,000	30	287	−33.2	34	23	288	−32.5	53	27	288	−33.2	33	31	288	−33.1	38	30	288	−33.8	48	28	289	−30.5	47	30	289	−30.2	44
11,000	30	248	−40.7		21	250	−40.3		27	249	−41.0		31	249	−40.8		30	249	−41.7		28	251	−37.8		29	251	−37.6	43
12,000	29	214	−48.0		21	216	−47.8		25	215	−48.4		30	214	−48.4		30	215	−49.4		28	217	−45.0		29	217	−45.1	
13,000	29	184	−55.3		21	185	−55.8		23	185	−55.3		30	184	−55.9		30	184	−56.8		28	186	−52.2		29	186	−52.6	
14,000	29	157	−61.8		21	157	−63.4		20	157	−62.2		30	157	−62.5		29	156	−63.7		27	159	−59.3		29	159	−60.3	
15,000	29	133	−67.9		20	133	−69.2		20	134	−67.8		29	133	−67.4		29	133	−68.7		27	135	−65.5		29	135	−67.3	
16,000	29	112	−72.2		19	113	−73.5		20	113	−71.3		28	113	−69.2		26	112	−70.9		26	114	−70.0		29	114	−72.9	
17,000	27	95	−74.0		19	95	−75.3		18	95	−71.8		26	95	−69.1		24	95	−71.0		25	97	−71.5		26	96	−75.8	
18,000	26	80	−72.4		14	80	−71.0		16	80	−68.8		24	81	−67.9		20	80	−69.1		22	82	−70.4		24	81	−76.9	
19,000	21	68	−67.7		10	68	−66.0		16	69	−63.9		20	69	−64.5		17	68	−66.3		17	69	−68.3		16	68	−75.3	
20,000	17	58	−63.8		5	57	−62.9		11	58	−59.4		16	58	−61.3		8	58	−64.3		10	58	−66.0		8	58	−71.0	
21,000	12	49	−60.0										6	50	−59.8													
22,000	5	41	−58.6																									

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent obtained by radiosondes.*—Continued

MONTHS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	November 1941 (10 m.)				December 1941 (10 m.)				January 1942 (10 m.)				February 1942 (10 m.)				March 1942 (10 m.)				April 1942 (10 m.)				May 1942 (10 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,012	26.2	80	31	1,013	26.0	84	31	1,015	24.8	79	28	1,012	24.5	81	31	1,012	25.6	79	23	1,013	25.8	77	31	1,011	26.3	84
500	30	958	23.3	83	31	957	23.1	87	31	960	21.9	82	28	957	21.9	83	31	958	22.2	84	23	957	22.6	83	31	956	23.1	89
1,000	30	904	20.3	79	31	904	20.2	84	31	906	18.5	83	28	904	18.9	79	31	904	19.2	78	23	904	19.3	81	31	903	20.1	84
1,500	30	853	17.6	75	31	853	17.4	81	31	855	15.5	81	28	852	16.5	73	31	853	17.0	68	23	853	16.6	76	31	852	17.9	79
2,000	30	804	14.8	74	31	804	15.0	76	31	805	13.1	73	28	803	14.5	60	31	804	15.0	57	23	804	14.7	63	31	803	14.7	75
2,500	30	758	12.3	70	31	758	12.8	69	31	759	11.0	64	28	757	12.5	51	31	758	12.8	50	23	757	12.7	52	31	757	12.0	72
3,000	30	714	10.3	60	31	714	10.4	62	31	714	8.9	55	28	713	10.5	46	31	714	10.4	44	23	713	10.5	46	31	712	9.4	67
4,000	30	633	5.6	53	30	633	5.8	47	31	633	4.2	46	28	632	5.7	37	29	632	6.1	36	21	632	5.4	42	31	631	4.1	64
5,000	30	560	0.6	48	29	560	0.5	41	30	559	−0.6	38	28	559	0.4	28	29	559	0.8	31	21	559	0.4	41	31	558	−0.7	62
6,000	29	494	−5.0	45	28	494	−5.3	39	30	493	−7.0	32	28	493	−5.7	24	29	493	−5.6	28	19	493	−5.1	41	31	492	−6.0	54
7,000	29	434	−11.4	43	28	434	−11.6	38	29	433	−13.7	24	27	433	−12.4	22	29	434	−12.3	27	18	434	−11.9	36	31	432	−12.3	48
8,000	29	380	−17.7	41	28	380	−18.0	37	29	379	−19.8	20	26	379	−18.8	21	29	380	−19.1	26	18	380	−18.4	33	31	378	−19.3	46
9,000	29	331	−24.4	39	28	332	−25.3	37	28	330	−27.3	19	26	330	−26.4	20	27	331	−26.1	25	18	331	−25.8	32	31	330	−26.0	43
10,000	29	289	−31.3	38	27	289	−32.5	36	28	287	−34.4	18	25	288	−34.1	20	27	288	−33.2	25	18	288	−33.1	32	31	287	−33.4	----
11,000	28	250	−38.9	----	26	250	−39.8	----	28	248	−42.0	----	25	249	−41.2	----	27	249	−40.6	----	17	250	−40.6	----	31	248	−41.4	----
12,000	28	216	−46.1	----	26	215	−46.9	----	27	214	−49.0	----	25	214	−47.5	----	27	215	−47.9	----	17	216	−48.5	----	31	214	−49.0	----
13,000	27	185	−53.4	----	25	185	−53.7	----	27	183	−56.1	----	25	184	−53.9	----	27	184	−55.6	----	15	185	−55.8	----	31	183	−57.6	----
14,000	26	158	−60.4	----	25	158	−60.2	----	27	156	−62.1	----	25	157	−61.0	----	27	157	−63.3	----	14	158	−63.2	----	30	156	−66.0	----
15,000	26	135	−67.0	----	25	134	−65.9	----	25	133	−67.3	----	24	133	−68.6	----	26	133	−70.6	----	14	133	−70.3	----	30	132	−73.9	----
16,000	26	114	−72.1	----	24	114	−70.4	----	24	112	−72.4	----	24	112	−75.6	----	24	113	−76.5	----	13	112	−76.8	----	----	----	----	----
17,000	22	96	−75.6	----	18	96	−73.7	----	20	94	−77.0	----	23	94	−80.2	----	22	94	−81.4	----	12	94	−80.1	----	----	----	----	----
18,000	17	80	−77.4	----	17	81	−76.3	----	18	79	−79.7	----	18	79	−83.5	----	15	79	−82.5	----	8	80	−82.6	----	----	----	----	----
19,000	8	68	−77.8	----	7	68	−77.9	----	----	----	----	----	15	66	−82.9	----	9	66	−80.4	----	6	66	−80.7	----	----	----	----	----

	June, 1942 (10 m.)				July, 1942 (10 m.)				August, 1942 (10 m.)				September, 1942 (10 m.)				October 1942 (10 m.)				November 1942 (10 m.)			
Surface	30	1011	27.2	85	30	1014	27.0	85	28	1012	26.8	86	27	1011	26.7	86	21	1012	26.4	85	30	1011	25.8	80
500	30	957	23.9	88	30	959	23.2	89	28	957	22.9	90	27	956	23.3	90	21	957	23.5	87	30	956	22.4	85
1,000	30	904	21.0	82	30	906	20.1	85	28	904	19.9	86	27	903	20.5	85	21	904	20.6	84	30	903	19.1	86
1,500	30	853	18.4	77	30	855	17.5	77	28	853	16.9	81	27	853	17.7	80	21	853	17.5	84	30	852	16.6	81
2,000	30	804	15.9	72	30	806	14.7	71	28	804	14.1	77	27	804	15.0	77	21	804	14.6	83	30	803	14.0	77
2,500	30	858	13.5	66	30	759	12.3	65	28	758	11.7	73	27	758	12.6	71	21	758	12.1	79	30	757	11.8	71
3,000	30	714	10.9	61	30	716	9.6	60	28	714	9.0	70	27	714	9.9	69	21	714	9.8	71	30	713	9.8	61
4,000	28	633	4.9	62	30	634	4.0	57	26	632	3.5	67	26	632	4.6	68	21	632	5.1	56	30	632	4.8	52
5,000	28	559	−1.1	64	29	560	−1.6	57	26	559	−2.3	67	26	559	−0.8	70	21	559	−0.1	45	30	558	−0.6	49
6,000	28	493	−7.0	59	28	493	−7.7	56	26	492	−8.3	68	26	492	−6.5	71	21	493	−5.8	39	29	492	−6.3	43
7,000	27	433	−13.1	56	26	433	−14.1	55	26	432	−14.3	67	26	433	−12.4	67	21	433	−12.2	35	29	432	−13.0	40
8,000	27	379	−19.1	54	23	378	−20.2	53	26	377	−20.5	64	26	378	−19.4	66	21	378	−19.5	33	28	378	−20.0	39
9,000	27	330	−26.0	53	23	330	−27.1	52	26	329	−27.8	61	26	329	−26.4	65	21	330	−27.1	32	27	329	−27.2	39
10,000	27	287	−33.9	----	23	287	−34.7	----	25	286	−35.7	60	25	286	−34.0	62	21	287	−34.3	31	27	286	−34.7	38
11,000	27	248	−41.9	----	22	248	−42.5	----	24	247	−43.6	----	24	247	−42.2	----	21	248	−42.0	----	27	247	−42.4	----
12,000	27	214	−50.4	----	20	213	−50.8	----	23	212	−52.0	----	24	213	−50.7	----	18	214	−49.9	----	27	213	−50.4	----
13,000	27	183	−59.7	----	18	183	−58.7	----	21	181	−60.4	----	24	182	−59.8	----	18	183	−58.7	----	25	182	−58.5	----

Altitude (meters) m. s. l.	Year 1941 (10 m.)				Year 1942 (10 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	364	1,012	26.2	82	340	1,012	26.0	83
500	364	957	23.0	86	340	957	22.8	86
1,000	364	904	20.2	81	340	904	19.7	83
1,500	364	853	17.5	75	340	853	17.0	78
2,000	364	804	15.1	69	340	804	14.5	72
2,500	364	758	12.9	62	339	758	12.2	65
3,000	364	714	10.5	56	338	714	9.8	59
4,000	360	633	5.4	49	329	632	4.6	54
5,000	357	560	−0.2	45	326	559	−0.7	51
6,000	352	493	−6.1	43	322	493	−6.6	48
7,000	350	434	−12.5	41	316	433	−13.0	44
8,000	348	379	−18.7	39	310	378	−19.7	42

Altitude (meters) m. s. l.	Year 1941 (10 m.)				Year 1942 (10 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
9,000	345	331	−25.6	38	305	330	−26.8	41
10,000	342	288	−32.7	37	301	287	−34.3	----
11,000	335	249	−40.3	----	297	248	−42.0	----
12,000	331	215	−47.6	----	290	214	−49.8	----
13,000	327	184	−54.9	----	281	183	−57.8	----
14,000	320	157	−61.9	----	----	----	----	----
15,000	314	134	−67.9	----	----	----	----	----
16,000	307	113	−72.3	----	----	----	----	----
17,000	280	95	−74.1	----	----	----	----	----
18,000	246	80	−72.7	----	----	----	----	----
19,000	180	68	−69.7	----	----	----	----	----
20,000	109	58	−64.6	----	----	----	----	----

RIVER STAGES AND FLOODS

By C. R. JORDAN

Precipitation averaged above normal during February over most of the eastern half of the country except Florida, New England, and the Lakes region. It was particularly heavy in northeastern Texas, Oklahoma, and northwestern Missouri. Rainfall also averaged above normal in the far West.

There was some light overflow in Pennsylvania, New York, and New England that resulted from the melting of snow or from backwater from ice jams that accompanied the Spring break-ups. Moderately severe flooding occurred in the Central States from the Gulf of Mexico to North Dakota, and flooding was reported in California, Nevada, and Oregon.

Snow and ice conditions at the end of February had improved considerably in Pennsylvania and western and southern New York and to some extent in southern New England. A heavy snow cover was still present in Maine and in the headwater areas of the Merrimack, Connecticut, Hudson, Delaware, and Susquehanna Rivers.

A brief summary of the conditions as they existed at the end of February in individual basins is given below. The surveys of snow depth and water content represent the joint efforts of many cooperating agencies, public and private.

Rivers in Maine.—Snow depths in the headwaters of the larger Maine Rivers decreased slightly during the last week of February, but most of the snow melt did not run off, but settled to the base of the cover, so the water content of the snow has actually increased by a small amount.

In the central and southern parts of the State, snow cover and water content of the snow have both decreased considerably. This lessens the flood threat by giving promise of free passage in the lower reaches of the rivers for the potential overflow from the headwaters.

Merrimack Basin.—Water content of the snow has substantially increased. The storms of February 22 and 26 produced precipitation mostly in the form of rain. Moderate rises in temperature attended the rain in the lower basin, and resulted in a considerable melting of snow in that area. However, as maximum temperatures in the area above Manchester remained in the lower 40's and upper 30's, there was a negligible increase in run-off from the previous week over that portion as the rainfall was largely absorbed by the snow.

A snow survey near the end of the month showed an average water content of 7.6 inches in the area above Concord. Weighted for elevation, the value would be slightly higher. This compares with an average water content of 5.3 inches from a survey made earlier in the month.

Ice thickness decreased somewhat, and open spaces were increasing in number in the lower and middle reaches; little change was noted in the upper reaches.

Connecticut River.—The weather had some effect during the last week of February in slowly changing the snow cover in the northern and central portions of the Connecticut River Basin to a greater density and, some run-off was evident from this area. A more satisfactory condition with respect to relief from flood potentialities progressed in the south portion, particularly in Connecticut, where prolonged thawing temperatures and rain during February 21 to 27 melted away at least one-third of the snow and ice on the ground. In Massachusetts and Connecticut the river ice softened and eroded and showed further signs of going out easily with the steady rise of tributaries and the main river.

The Connecticut River and tributaries were beginning to rise as the month closed as may be expected at this season. However, stages were still very low and it would take a considerable amount of rainfall, together with prolonged temperatures above 40°, to melt the snow fast enough to produce sufficient run-off to exceed the storage capacity of the river channels. Nevertheless, considering the inches of water content in the snow, it must be concluded from similar conditions of past years, that the flood potentialities continue critical.

Hudson River.—A combination of favorable weather sequences reduced the flood threat in the Hudson and Mohawk Rivers. The ice continued to deteriorate in practically all sections except the most northern. Snow depths ranged from less than 5 inches in the lower Hudson Valley to 35 inches in the upper Sacandaga. Water content ranged from 1 to 3 inches in the lower Hudson and from 6 to 10 inches in the Sacandaga Basin. Water content in the Mohawk and upper Hudson River was only slightly less than in the Sacandaga.

Delaware River.—Temperatures remained well above normal during the latter part of February, while moderate to heavy rains were reported on the 26th. These conditions melted the entire snow cover in the Schuylkill Basin and the Delaware Basin below Belvidere, including the lower reaches of the Lehigh.

In the upper reaches of the Delaware and Lehigh Basins, including the Lackawaxen, the snow cover was reduced about 50 percent with the water content of the present cover from 30 to 40 percent less than earlier in February. The Schuylkill was free of ice and none was reported on the Delaware below Port Jervis except locally near Dingman's Ferry. Ice was breaking up on the Lackawaxen and a small foot bridge at Hawley was carried out by a jam during the night of the 27–28th.

Susquehanna River.—During the latter part of February weather conditions were favorable for snow melting and easy run-off from the watershed above Towanda. The average snow depth on the watershed settled and was reduced to 9.1 inches but with an estimated water content of 5.32 inches or an abnormal density of 58 percent. Many ice gorges in the river courses were broken up and carried downstream thus greatly relieving the ice-pack menace but considerable ice remains in the up-river areas to go out later.

In the Susquehanna below Towanda much of the snow was removed and conditions are very favorable in the Juniata and West Branch areas and on the North Branch they are improved as only a normal snow cover now exists. Moderate rises in stages occurred in all streams, but were well below flood levels except for backwater from ice jams in the West Branch in vicinity of Renovo and in the lower Susquehanna below Harrisburg. Most of the ice was removed except in northern creeks and in the basin above Towanda.

Ohio River Basin above Pittsburgh.—With the exception of a relatively small area in the extreme upper portion of the Allegheny Basin, the snow on the ground at the end of February was of little importance.

Mild weather continued most of the time during March over the Northeastern States without the occurrence of any heavy rain producing storms and the snow cover was gradually depleted except in the higher elevations of New England. The run-off was accommodated by the streams without any serious overflow.

Atlantic Slope Drainage.—There was some light overflow at scattered points in New York and Pennsylvania that resulted mostly from backwater when ice gorges formed in numerous streams. Overflow was mostly local and damage was not extensive.

Moderately heavy rainfall on February 12–13 produced slightly above flood stages on the Cape Fear, Neuse, Tar, and Roanoke Rivers in eastern North Carolina. The heavy flow was maintained through the month and into early March in the lower Neuse River and in the Roanoke River in the Williamston area. Only light damage was reported.

Light flooding occurred at scattered points during the month on the Pee Dee, Broad, Ocmulgee, and Altamaha Rivers but no damage was reported.

East Gulf of Mexico Drainage.—Rainfall was frequent over the eastern Gulf States during the latter half of February. Light flooding occurred at a few points along the Apalachicola, Coosa, Cahaba, and Alabama Rivers and wide overflow was in progress at the end of the month along the Black Warrior, Tombigbee, and Pearl Rivers.

There were three distinct rises in the Black Warrior River from February 13 to March 6. Heavy rainfall over the Warrior watershed on February 12–13, averaged 3.25 inches and caused a 24-hour rise at Tuscaloosa of 30.5 feet. The river crested at 56.2 feet on February 14, 9.2 feet above flood stage. On February 21–22, additional rainfall averaged about 1.50 inches over the watershed and a second crest of 46.0 feet, one foot below flood stage, was reached early on the 23rd. A third crest of 52.7 feet at Tuscaloosa was reached on March 6th, following the rainfall of March 3–4, that averaged 2.80 inches over the basin.

Beginning on February 19, rain fell every day for three

days over the entire Tombigbee River Basin, averaging 4.30 inches north of Demopolis, Ala., and 2.30 inches south of Demopolis. The heaviest rainfall reported was at Macon, Miss., where a total of 7.20 inches was recorded. The upper Tombigbee crested at Aberdeen, Miss., 4 feet above flood stage on Feb. 23 and receded to below flood stage by March 3 when additional rainfall that averaged 3 inches over the upper basin on March 3–4 started the upper Tombigbee to rising again. The lower Tombigbee was at a fairly high stage that resulted from rains early in February and the additional rain that began falling near the middle of the month swelled the stream quickly past flood stage and maintained high stages well into March. Considerable damage resulted from this overflow but damage reports have not yet been collected.

Light to moderate flooding was also in progress along the Pearl River in Mississippi that began about the middle of February and continued into March.

Upper Mississippi and Missouri Basin.—Flood stage was reached on the Des Moines River at Eddyville, Iowa, on Feb. 15 and again on the 18th through the 21st. These stages resulted from an ice gorge that formed below Eddyville and caused backwater. There was no damage as the overflow covered only low farm land. Ice action also caused light local flooding at Augusta, Iowa, on the Skunk River from Feb. 16–19. There was also some light overflow at a few points along the Meramec, Gasconade, and Missouri Rivers.

Ohio Basin.—Light overflow occurred near the end of February in many of the Ohio River tributaries particularly in Pennsylvania, West Virginia, Ohio, and Kentucky and moderate flood stages were reached in the Cumberland River Basin from Feb. 19 through March 24. Damage in the Cumberland Basin amounted to about $23,750.

A general rise began in the Ohio River about the middle of February and the river exceeded flood stage at most points by the end of the month. The rise continued into March and developed into the severest flood in the Ohio River since the record flood of 1937. This flood will be covered more fully in a later issue of the REVIEW.

White and Arkansas Basins.—Heavy rains on Feb. 20–21 and again on Feb. 25–27 produced sharp rises in the streams of Arkansas. Rainfall was particularly heavy in west-central Arkansas on the 20th and 21st, with some stations measuring from 3 to more than 4 inches in 24 hours. As indicated by the table at the end of this report, there were at least 2 rises on all the rivers, except on the lower White River where the rise was steady and continued into March. Statistics on flood loss have not yet been compiled.

Red Basin.—Flood stages were exceeded at a number of stations on the tributaries of the Red River and on the main stream at Fulton, Ark., during the last week of February and continued into March.

Lower Mississippi Basin.—The Wolf River at Rossville, Tenn.; Big Lake Outlet at Manila, Ark.; the Tallahatchie River at Swan Lake, Miss.; and the Mississippi River at New Madrid, Mo., reached flood stage during the last few days of February and these rises also continued into March.

West Gulf of Mexico Drainage.—Heavy rains occurred over northeastern Texas during the latter part of February and a major flood prevailed in the streams of this area at the end of the month. Since the flooding extended into March, it will be described more fully in a later report.

Gulf of California Drainage.—A storm during early February produced heavy rainfall over central and northern California. The Fresno and Merced Rivers, Poso Creek, and other small streams overflowed in places, causing minor damage. Kings River overflowed lowlands in the vicinity of Centerville and Sanger with minor damage being caused. As the flood passed downstream it was divided at the diversion dam in the vicinity of Riverdale between Kings River and a channel leading to the San Joaquin River. The flow in the lower Kings River channel was still too great and levees broke in several places, flooding considerable areas of farm lands, some of which remained under water throughout the month.

The most serious damage was caused by the Kaweah River at Visalia and vicinity. The St. Johns River, one of the channels carrying the water of the Kaweah as it reaches the lower levels, overflowed during the night of February 1st, flooding a large portion of Visalia and spreading out over low farms lands in the vicinity.

Light flooding also resulted in the Mokelumne River at Bensons Ferry, Calif., and the Sacramento River at Knights Landing, Calif.

Rains were exceptionally heavy over the Consumnes River foothills. It was reported that Carsen Creek, a tributary to the Consumnes River, was out of its banks and reached the highest stage in the past 30 years.

Columbia Basin.—February was unusually warm and precipitation was above normal in western Oregon. Two periods of heavy warm rains occurred on Feb. 6–7 and 10–12 that melted much of the snow on the ground and produced moderately high crests on the Willamette River tributaries. Some flooding of lowlands occurred, but little damage other than erosion was reported.

FLOOD-STAGE REPORT FOR FEBRUARY 1945

[All dates in February unless otherwise specified]

River and station	Flood stage	Above flood stages—dates		Crest[1]	
		From—	To—	Stage	Date
ST. LAWRENCE DRAINAGE					
Lake Erie					
Sandusky: Upper Sandusky, Ohio	*Feet* 13	23	23	*Feet* 13.0	23
ATLANTIC SLOPE DRAINAGE					
Tioughnioga: Whitney Point, N. Y.	12	27	28	13.2	28
Chenango: Greene, N. Y.	8	27	28	8.8	28
West Branch: Renovo, Pa.	16	23	23	18.8	23
Susquehanna:					
Oneonta, N. Y.	12	27	28	12.5	28
Bainbridge, N. Y.	12	27	28	13.7	28
Vestal, N. Y.	14	27	28	14.5	28
James: Columbia, Va.	10	25	25	10.6	25
Roanoke:					
Weldon, N. C.	31	15	15	32.0	15
		24	25	31.7	24
Williamston, N. C.	10	18	Mar. 8	11.3	Mar. 1-2
Tar: Greenville, N. C.	13	25	[2]	------	------
Neuse:					
Neuse, N. C.	14	15	16	14.2	16
		19	21	15.1	20
		23	25	15.7	24
Smithfield, N. C.	13	15	27	16.5	25
Goldsboro, N. C.	14	23	Mar. 4	16.6	Mar. 2
Cape Fear: Lock No. 2, Elizabethtown, N. C.	20	15	17	23.2	16
		19	28	24.6	20
				26.1	25
PeeDee: Cheraw, S. C.	30	24	24	31.6	24
Broad: Blairs, S. C.	14	14	14	15.3	14
Santee: Rimini, S. C.	12	8	10	12.8	8
		15	[2]	15.0	18
Ocmulgee: Abbeville, Ga.	11	27	Mar. 4	11.5	Mar. 2
Altamaha: Charlotte, Ga.	12	27	Mar. 8	13.7	Mar. 5
EAST GULF OF MEXICO DRAINAGE					
Apalachicola: Blountstown, Fla.	15	20	Mar. 9	19.4	26
Coosa: Gadsden, Ala.	20	15	15	20.0	15
Cahaba: Centerville, Ala.	23	21	21	23.5	21
Alabama: Millers Ferry, Ala.	40	23	27	43.9	25
Black Warrior:					
Lock No. 10, Tuscaloosa, Ala.	46	13	16	56.2	14
Lock No. 7, Eutaw, Ala.	35	14	Mar. 2	46.6	25

See footnotes at end of table.

FLOOD-STAGE REPORT FOR FEBRUARY 1945—Continued

River and station	Flood stage	Above flood stages—dates From—	Above flood stages—dates To—	Crest Stage	Crest Date
EAST GULF OF MEXICO DRAINAGE—con.					
Tombigbee:	*Feet*			*Feet*	
Aberdeen, Miss.	34	22	26	38.0	23
Columbus, Miss.	29	23	27	31.2	24
Gainesville, Ala.	36	18	(1)	40.8	Mar. 1
Lock No. 4, Demopolis, Ala.	39	14	(1)		
Lock No. 3.	33	7	10	36.0	8
		14	(1)		
Lock No. 2.	46	16	(1)		
Lock No. 1.	31	17	(1)	38.9	Mar. 6
Sowashee Creek: Meridian, Miss.	15	13	13	15.9	13
Chickasawhay: Enterprise, Miss.	20	22	23	20.3	23
Pearl:					
Edinburg, Miss.	20	17	(1)	25.3	24
Jackson, Miss.	18	8	(1)	32.6	28
		6	8	16.5	7
Monticello, Miss.	15	13	18	16.8	15
		21	(1)	20.9	23, 26
Columbia, Miss.	17	23	(1)	19.6	27
Pearl River, La.	12	13	(1)		
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Skunk: Augusta, Iowa.	15	16	19	[3] 18.8	16
Des Moines: Eddyville, Iowa.	15	15	16	[4] 17.7	15
		18	21	[4] 16.6	19
Meramec: Pacific, Mo.	11	24	24	11.2	24
Missouri Basin					
Gasconade: Jerome, Mo.	15	23	23	15.9	23
Missouri: Nebraska City, Nebr.	15	13	15	[3] 16.7	14
Ohio Basin					
Allegheny:					
Olean, N. Y.	10	23	23	10.2	23
		27	(1)	[4] 10.9	27
Lock No. 8, Mosgrove, Pa.	24	23	23	[4] 25.8	23
		27	27	[4] 24.7	27
Lock No. 5, Schenley, Pa.	24	23	23	[4] 25.2	23
		27	(1)	[4] 27.0	27
Lock No. 4, Natrona, Pa.	24	23	23	24.3	23
		27	28	25.4	27
Lock No. 3, Acmetonia, Pa.	25	27	28	25.7	27
West Fork: Clarksburg, W. Va.	5	27	28	7.2	27
Monongahela:					
Lock No. 7, Greensboro, Pa.	30	27	27	33.7	27
Lock No. 6.	19.5	27	28	21.2	27
Lock No. 4, Charleroi, Pa.	30	27	28	31.3	27
Lock No. 2.	20.5	27	(1)	24.5	27
Little Kanawha:					
Glenville, W. Va.	23	27	27	23.9	27
Creston, W. Va.	20	27	(1)	22.4	27
Hocking: Athens, Ohio.	17	27	(1)		
Scioto:					
La Rue, Ohio.	11	23	23	11.9	23
Circleville, Ohio.	14	27	(1)		
Piketon, Ohio.	16	22	24	18.5	23
		27	(1)	22.2	28
Little Miami: Kings Mills, Ohio.	17	22	22	17.4	22
		27	27	20.1	27
Licking: Falmouth, Ky.	28	27	(1)	29.4	27
Rough: Dundee, Ky.	25	23	(1)	25.8	24
Barren: Bowling Green, Ky.	28	23	25	31.8	24
Green:					
Munfordville, Ky.	28	23	25	29.7	24
Lock No. 6, Brownsville, Ky.	28	23	25	29.5	24
		26	(1)		
Lock No. 4, Woodbury, Ky.	33	22	(1)	40.2	25
Lock No. 2, Rumsey, Ky.	34	23	(1)		
Kentucky:					
Lock No. 5.	20	23	24	21.0	23
		27	(1)	23.2	27
Lock No. 9.	20	22	24	21.2	23–24
		27	(1)		
East Fork: Seymour, Ind.	14	27	27	14.4	27
White: Hazleton, Ind.	16	27	(1)		
Cumberland:					
Celina, Tenn.	28	19	27	37.7	25
Carthage, Tenn.	40	22	24	40.9	23
Nashville, Tenn.	40	22	Mar. 2	44.6	23
				43.5	28
Clarksville, Tenn.	46	22	Mar. 5	51.1	Mar. 1
Lock 21.	28	18	19	33.2	19
		22	24	41.0	23
Lock F, Eddyville, Ky.	50	22	Mar. 24	60.6	Mar. 4
Duck: Columbia, Tenn.	32	22	24	37.0	23
Tennessee: Florence, Ala.	18	18	24	19.5	18
				21.0	22
Ohio:					
Pittsburgh, Pa.	25	27	28	27.7	28
Dam No. 7, Midland, Pa.	30	28	28	36.2	28
Dam No. 12, Wheeling, W. Va.	36	28	28	37.2	28
Point Pleasant, W. Va.	40	28	(1)		
Cincinnati, Ohio.	52	28	(1)		
Dam No. 41, Louisville, Ky., upper gage.	28	28	(1)		

FLOOD-STAGE REPORT FOR FEBRUARY 1945—Continued

River and station	Flood stage	Above flood stages—dates From—	Above flood stages—dates To—	Crest Stage	Crest Date
MISSISSIPPI SYSTEM—continued					
Ohio Basin—Continued					
Ohio—Continued.	*Feet*			*Feet*	
Tell City, Ind.	38	24	(1)		
Evansville, Ind.	37	24	(1)		
Mt. Vernon, Ind.	35	25	(1)		
Shawneetown, Ill.	33	24	(1)		
Cairo, Ill.	40	23	(1)		
White Basin					
Current: Doniphan, Mo.	10	23	23	10.7	23
		26	(1)	15.1	27
Black:					
Poplar Bluff, Mo.	16	24	24	16.0	24
		27	(1)	19.7	28
Black Rock, Ark.	14	21	(1)	20.0	23
				25.3	28
Little Red: Heber Springs, Ark.	30	22	22	34.6	22
White:					
Cotter, Ark.	21	21	22	22.0	21
		26	27	22.8	26
Calico Rock, Ark.	19	22	24	27.3	22
		26	(1)	26.8	27
Batesville, Ark.	23	22	25	30.5	23
		26	(1)	31.3	27–28
Newport, Ark.	26	23	(1)		
Augusta, Ark.	32	25	(1)		
Georgetown, Ark.	21	24	(1)		
Des Arc, Ark.	24	26	(1)		
Clarendon, Ark.	26	27	(1)		
Arkansas Basin					
Poteau: Poteau, Okla.	21	18	20	22.5	19
		20		32.7	23
Petit Jean: Danville, Ark.	20	18	(1)	21.5	19
				27.0	22
				26.5	28
Red Basin					
Little Missouri: Boughton, Ark.	20	22	24	21.6	23
		28	(1)		
Saline: Benton, Ark.	20	21	22	24.6	21
		28	(1)		
Ouachita:					
Arkadelphia, Ark.	17	21	24	25.5	22
		27	(1)	25.4	28
Camden, Ark.	26	23	(1)	35.8	27
Little: Whitecliffs, Ark.	25	23	(1)	28.0	24
Sulphur:					
Hagansport, Tex.	38	13	13	38.7	13
		21	25	41.4	22
		26	(1)		
Naples, Tex.	22	21	(1)	29.7	25
Cypress: Jefferson, Tex.	18	26	(1)	20.6	27
Red: Fulton, Ark.	25	23	(1)		
Lower Mississippi Basin					
Wolf: Rossville, Tenn.	10	27	(1)		
Big Lake Outlet: Manila, Ark.	10	23	(1)		
Tallahatchie: Swan Lake, Miss.	26	27	(1)		
Mississippi: New Madrid, Mo.	34	27	(1)		
WEST GULF OF MEXICO DRAINAGE					
Sabine:					
Gladewater, Tex.	26	24	(1)		
Bon Wier, Tex.	17	Jan. 1	10	20.5	Jan. 10–11.
				20.0	Jan. 20
				19.5	7
Elm Fork: Carrollton, Tex.	6	20	25	12.6	22
		27	(1)	11.3	28
East Fork: Rockwall (nr.), Tex.	10	13	17	15.4	14
		20	26	20.7	22
		26	(1)	19.4	28
Trinity:					
Dallas, Tex.	28	21	(1)	40.6	23
Rosser (nr.), Tex.	26	15	17	26.8	17
		20	(1)	37.2	25
Trinidad, Tex.	28	20	(1)	42.0	26
Long Lake, Tex.	40	25	(1)	42.8	27
Liberty, Tex.	24	23	(1)	24.6	26
GULF OF CALIFORNIA DRAINAGE					
San Joaquin Basin					
Kings: Piedra, Calif.	10	1	3	16.6	2
Mokelumne: Bensons Ferry, Calif.	12	3	5	13.5	4
Sacramento Basin					
Sacramento: Knights Landing, Calif.	30	3	4	30.1	4
Columbia Basin					
McKenzie: Leaburg, Oreg.	12	8	8	14.0	8
		13	14	15.8	13
Santiam: Jefferson, Oreg.	13	8	9	17.25	8
		13	15	17.2	13
South Yamhill:					
Willamina, Oreg.	8	7	8	10.8	7
Whiteson, Oreg.	38	8	9	40.9	8
Tualatin: Dilley, Oreg.	12	8	8	12.6	8
Willamette: Harrisburg, Oreg.	12	9	10	13.6	8
		13	15	15.6	14

[1] Provisional. [2] Continued into March. [3] Ice gorge below gage. [4] Affected by ice.

CLIMATOLOGICAL DATA

CONDENSED CLIMATOLOGICAL SUMMARY OF TEMPERATURE AND PRECIPITATION BY SECTIONS

[For description of tables and charts, see Review, January 1943, p. 15]

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

Section	Temperature								Precipitation					
			Monthly extremes								Greatest monthly		Least monthly	
	Section average	Departure from the normal	Station	Highest	Date	Station	Lowest	Date	Section average	Departure from the normal	Station	Amount	Station	Amount
	°F.	°F.		°F.			°F.		In.	In.		In.		In.
Alabama	53.2	+4.3	Wetumpka	85	15	Valley Head	10	1	7.05	+1.80	Centerville	13.04	Frisco City	2.70
Arizona	46.8	+.9	Wellton	84	15	Alpine	−5	27	.53	−.83	Bright Angel R. S.	3.37	2 stations	.00
Arkansas	44.2	+.5	Morrilton	88	15	Mammoth Spring	12	1	7.78	+4.27	Dardanelle	11.40	Dumas	4.96
California	47.7	−.1	Eagle Mountain	87	12	Ellery Lake	−8	15	5.42	+.81	Bullard's Bar P. H.	18.35	Hayfield Reservoir	.00
Colorado	30.3	+3.1	Eversoll Ranch	81	14	Taylor Park	−30	27	.85	−.13	Wolf Creek Pass	4.92	3 stations	T
Florida	64.3	+3.7	3 stations	91	[1] 19	Lake City	23	1	1.24	−1.84	St. Lucie Lock No. 2	4.94	4 stations	.00
Georgia	52.2	+3.5	5 stations	85	27	Blairsville	8	1	5.64	+.78	Experiment	9.80	Savannah Beach	1.15
Idaho	32.0	+3.9	Bruneau	65	10	Island Park Dam	−21	26	2.28	+.52	Roland	6.17	Barton Flat	.16
Illinois	32.7	+2.8	Sparta	81	15	Freeport	−14	1	2.52	+.58	Elizabethtown	8.94	Rochelle	.52
Indiana	32.6	+2.0	Madison	75	15	Forest Reserve	−12	1	3.28	+.84	Scottsburg	7.34	Notre Dame	.91
Iowa	25.5	+3.0	Corning	68	14	Decorah	−23	1	1.43	+.34	Shenandoah	2.75	Centerville	.55
Kansas	35.2	+2.0	3 stations	79	14	Greensburg	2	28	.91	−.08	Oswego	2.32	Goodland	.13
Kentucky	38.9	+1.7	5 stations	78	15	Shelbyville	−9	1	6.37	+2.90	Lancaster	9.01	Pikesville	4.08
Louisiana	57.1	+3.2	Donaldsonville	86	16	Lake Providence	23	1	5.60	+1.04	Lake Providence	8.94	Port Sulphur	2.71
Maryland-Delaware	35.1	+1.8	Salisbury, Md	70	22	Oakland, Md	−11	4	3.16	+.25	Sines, Md	5.77	Edgemont, Md	1.69
Michigan	22.8	+2.5	Dowagiac	54	25	Watersmeet	−33	19	1.72	+.03	Phoenix	5.88	Eau Claire	.41
Minnesota	15.2	+2.5	Redwood Falls	51	24	Pine River Dam	−36	17	1.20	+.44	Pigeon River Bridge	3.20	Argyle	.07
Mississippi	52.8	+3.3	Magnolia	85	16	Booneville	16	1	7.37	+2.41	Louisville	12.64	Bay St. Louis	4.01
Missouri	35.5	+2.2	Arcadia	85	15	Canton	−13	1	4.05	+1.94	Elijah	10.38	Chillicothe	.42
Montana	25.1	+2.8	Fort Benton	59	8	2 stations	−33	16	.60	−.16	Trout Creek	3.22	3 stations	T
Nebraska	30.0	+3.6	Culbertson	75	14	do	−14	17	.73	+.03	Ashland	2.52	2 stations	T
Nevada	36.7	+2.6	Hiko	82	[1] 15	Ruby Lake	−12	25	1.54	+.45	Marlette Lake	8.90	Mina	.00
New England	24.2	+1.5	Fall River, Mass	54	22	Lake Frontiere, Maine	−30	18	3.47	+.40	Somerset, Vt	6.16	Bethlehem, N. H	.74
New Jersey	32.2	+1.6	4 stations	60	27	Layton	−8	6	3.16	−.31	Elizabeth	4.62	Lambertville	2.11
New Mexico	39.8	+2.5	Pearl (near)	86	21	Eagle Nest	−22	7	.22	−.48	3 stations	.80	19 stations	.00
New York	24.6	+2.1	New York	57	27	Whitehall	−18	4	2.81	+.14	Williamstown	5.75	Peru	1.02
North Carolina	44.4	+1.7	Plymouth	82	16	Mount Mitchell	−9	1	5.08	+1.03	Andrews	8.09	Elizabethtown	2.55
North Dakota	15.1	+5.2	Medora	52	8	Ashley	−29	18	.36	−.10	Ellendale	1.89	Fessenden	.02
Ohio	30.9	+1.4	Portsmouth	79	15	Mansfield	−10	3	3.23	+.63	Hillsboro	6.11	Bowling Green	1.05
Oklahoma	41.8	+.6	4 stations	81	[1] 9	Fort Reno	2	28	3.20	+1.74	Tuskahoma	13.21	Kenton	.18
Oregon	37.7	+2.4	3 stations	68	7	2 stations	−7	19	4.04	+.85	Valsetz	19.43	Redmond	.44
Pennsylvania	30.5	+2.1	Uniontown	71	15	4 stations	−14	4	2.66	−.15	Portland	5.31	Covington	1.26
South Carolina	50.0	+2.5	Walterboro	88	28	Caesars Head	6	1	4.76	+.54	Longcreek	8.07	Florence Airport	2.55
South Dakota	22.6	+3.3	Kennebec	66	8	Pollock	−28	17	.68	+.12	Sioux Falls	2.18	Camp Crook	.11
Tennessee	42.4	+1.2	Celina	79	15	2 stations	1	1	7.50	+3.05	Lewisburg	12.89	Dover	4.05
Texas	52.6	+1.3	Harlingen	95	13	Quanah	10	28	2.77	+.99	Paris	9.75	3 stations	.00
Utah	33.4	+3.5	2 stations	73	[1] 8	2 stations	−15	26	1.88	+.57	Silver Lake (Brighton)	7.65	Callao	.05
Virginia	39.4	+2.1	Diamond Springs	81	16	Mountain Lake	−4	1	3.52	+.44	Pennington Gap	7.39	Riverton	1.79
Washington	37.6	+3.4	Richland	69	7	Chesaw	−4	16	4.57	+1.06	Quinault	18.87	Clarkston Heights	.81
West Virginia	35.5	+2.1	London Locks	80	15	2 stations	−13	4	4.36	+1.23	Kumbrabow State Forest	6.68	Martinsburg	1.52
Wisconsin	19.2	+2.0	Wisconsin Dells	55	24	Solon Springs	−33	17	1.99	+.79	Wausau Airport	4.51	Oconomowoc	.86
Wyoming	24.1	+1.9	Hawk Springs	63	8	Triangle F Ranch	−32	[1] 25	1.00	+.22	Grassy Lake Dam	7.51	2 stations	T
Alaska (January)	15.2	+12.4	Japonski	52	29	Point Lay	−53	11	2.38	+.18	Whittier	32.36	do	T
Hawaii	70.5	+1.8	Waianae	90	24	Haleakala R. S	35	12	3.29	−4.28	Koolau Dam	18.17	6 stations	.00
Puerto Rico														
Late Report for January, 1945														
Pennsylvania	20.4	−7.8	2 stations	58	1	Kane	−28	25	2.68	−.48	Montrose	5.45	Jamestown	1.04

[1] Other dates also

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS

District and station	Elevation of instruments: Barometer above sea level	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Total degree days	Mean temperature of the dew-point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Wind: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
	Ft.	*Ft.*	*Ft.*	*Mbs.*	*Mbs.*	*Mbs.*	°F.	°F.	°F.		°F.	°F.		°F.	°F		°F.	%	*In.*	*In.*	*In.*		*Mi.*								*0–10*	*In.*	*In.*	
New England							26.3	+1.5										77	3.73	+0.4											5.9			
Eastport	75	67	85	1,012.9	1,016.3	+1.1	24.8	+3.3	46	22	31	8	1	18	25	1,127	16	70	3.96	+.6	1.25	11	11.8	nw.	44	ne.	8	12	5	11	5.4	19.3	13.8	0
Greenville, Maine	1,070	6	41	976.0	1,017.6	.....	16.4	+2.9	37	11	27	−12	15	6	42	1,362	11	...	2.32	−.4	.66	11	...	n.	...	...	...	8	6	14	...	17.4	32.5	0
Portland, Maine [1]	103	5	43	1,013.2	1,017.6	+1.0	21.9	−1.9	44	23	34	−9	1	10	41	1,201	16	82	3.92	−.1	1.42	11	8.9	nw.	34	n.	8	10	9	9	5.4	27.6	7.5	0
Concord [1]	289	5	45	1,006.8	1,018.0	+.7	23.0	+2.7	44	27	34	−6	7	12	43	1,173	16	76	3.00	+.1	1.15	15	9.0	nw.	28	nw.	1	7	10	11	6.1	17.9	9.5	0
Burlington [1]	403	5	51	1,002.7	1,018.6	+1.7	20.2	+.8	42	23	30	−9	4	11	32	1,255	15	82	.82	−.8	.22	11	7.9	nw.	31	w.	27	2	9	17	7.3	6.5	3.4	0
Boston [1]	124	33	62	1,012.5	1,017.6	+.3	30.5	+1.7	51	27	37	11	1	24	23	965	21	70	4.09	+.7	1.63	13	12.7	nw.	37	ne.	8	6	10	12	6.1	26.3	1.3	0
Nantucket	12	11	59	1,016.6	1,017.3	.0	31.9	+1.2	50	22	37	15	1	27	18	925	26	82	5.07	+1.7	1.46	16	11.8	nw.	47	e.	8	9	6	13	6.0	13.8	.0	0
Block Island	26	11	46	1,016.3	1,017.6	−.4	31.8	+1.4	50	22	37	15	1	26	17	928	26	81	5.16	+1.5	1.41	15	17.8	nw.	45	nw.	1	11	9	8	5.1	12.6	T	0
Providence [2]	159	46	60	1,011.9	1,018.3	+.7	31.4	+2.4	52	22	39	12	1	24	23	944	20	70	4.26	+.6	1.58	14	9.0	nw.	36	sw.	27	10	7	11	5.8	23.9	T	0
Hartford [1]	159	5	44	1,012.2	1,019.0	+1.0	27.6	+.4	47	27	37	−2	4	18	37	1,042	20	76	4.55	+.7	1.44	16	9.0	nw.	28	n.	8	7	11	10	5.9	24.3	4.9	0
New Haven [1]	107	5	39	1,014.6	1,019.0	+.7	29.6	+1.7	48	16	37	11	6	22	23	994	22	78	3.87	+.2	1.18	15	7.8	nw.	21	nw.	1	8	7	13	6.1	16.1	.1	0
Middle Atlantic							35.2	+2.1										73	3.07	−0.1											6.5			
Albany [1]	97	26	40	1,014.9	1,019.0	+.7	24.8	+3.4	43	23	32	0	7	18	29	1,124	18	75	1.47	−1.0	.50	13	10.4	w.	34	w.	1	4	9	15	6.9	11.6	2.1	0
Binghamton [2]	871	60	79	986.1	1,019.6	+1.0	26.2	+2.2	52	22	34	−8	4	18	41	1,080	18	82	2.53	+.3	.64	17	6.7	w.	24	w.	2	3	9	16	7.7	15.6	7.0	1
New York	314	415	454	1,006.8	1,019.3	+.7	34.4	+3.1	57	27	42	15	1	27	29	857	23	66	3.01	−.8	.86	13	16.7	nw.	46	nw.	24	7	10	11	5.7	6.1	T	0
Harrisburg [1]	374	30	49	1,005.8	1,020.0	+1.0	32.3	+2.1	58	26	40	8	4	25	27	916	24	75	2.02	−.9	.61	11	8.2	nw.	28	nw.	2	6	8	14	6.7	9.7	.3	0
Philadelphia [1]	114	5	57	1,015.6	1,020.3	+1.0	33.8	+1.3	58	27	41	13	20	26	26	875	26	78	3.35	.0	.81	12	9.1	nw.	26	nw.	1	7	2	19	6.9	7.9	.0	0
Reading	323	47	306	1,007.5	1,020.3	.....	33.4	+2.9	55	27	40	11	4	26	25	880	...	...	2.77	−.6	1.02	11	11.6	nw.	35	e.	13	7	6	15	6.6	7.0	.2	0
Scranton	805	72	104	989.5	1,020.0	+1.4	28.5	+1.2	49	15	36	2	4	21	33	1,024	...	...	2.55	−.5	1.10	13	6.3	n.	23	nw.	16	3	11	14	6.9	10.9	4.1	1
Atlantic City	52	37	172	1,017.6	1,020.0	+.4	35.4	+1.8	57	16	42	17	19	29	18	827	27	76	3.64	+.3	1.13	12	16.3	w.	47	ne.	13	7	5	16	6.6	2.9	.0	0
Trenton	190	89	107	1,012.5	1,020.0	.....	34.1	+3.4	59	27	41	15	1	27	28	835	24	70	2.54	−.7	.73	13	9.3	nw.	29	nw.	1	6	7	15	6.7	6.6	T	0
Baltimore [2]	123	100	215	1,015.6	1,020.7	+1.1	38.6	+3.2	61	27	45	18	1	32	27	735	26	70	3.44	.0	1.28	10	10.0	nw.	28	sw.	23	8	5	15	6.1	3.7	.5	0
Washington [2]	112	56	100	1,016.3	1,021.0	+1.4	38.4	+3.1	65	10	46	16	1	30	32	743	26	65	2.94	−.3	.72	10	8.4	nw.	25	nw.	1	7	4	17	6.4	2.6	.0	0
Cape Henry	18	8	54	1,019.3	1,020.7	.....	42.4	+1.2	75	22	49	20	1	35	35	638	34	78	4.61	+1.4	1.16	12	12.5	n.	34	nw.	6	10	6	12	5.9	T	.0	0
Lynchburg [1]	686	4	50	994.9	1,020.3	+.7	40.0	−.3	66	10	49	11	1	31	33	695	26	65	2.76	−.4	1.09	10	9.0	n.	29	sw.	26	7	6	15	6.7	.2	.0	0
Norfolk [2]	91	80	125	1,017.3	1,0213.	+1.7	44.0	+1.3	77	16	52	17	1	36	31	586	34	76	5.16	+1.9	1.56	13	10.4	ne.	27	sw.	22	8	8	12	6.1	T	.0	0
Richmond	144	11	52	1,014.6	1,021.3	+.7	41.8	+2.2	74	16	52	13	1	32	34	648	30	68	3.28	+.1	1.10	10	8.8	sw.	30	sw.	26	10	4	14	6.0	T	.0	0
South Atlantic							49.8	+2.6										77	3.94	+0.2											6.1			
Asheville	2,253	77	92	939.4	1,020.7	+.4	42.3	+3.8	71	15	52	7	1	33	39	638	31	72	4.22	+1.1	1.38	13	9.4	nw.	24	nw.	28	5	7	16	7.1	1.9	.0	0
Charlotte [2]	779	63	86	991.9	1,020.7	+.7	46.4	+2.5	74	16	55	17	1	38	30	522	36	76	5.37	+1.2	1.96	14	7.5	ne.	21	sw.	27	7	6	15	7.0	T	.0	0
Greensboro [1]	886	6	56	988.2	1,021.3	.....	42.0	+2.6	70	26	52	44	1	32	38	645	32	75	4.90	+1.2	1.61	14	8.1	ne.	25	sw.	26	4	8	16	7.2	T	.0	0
Hatteras	11	5	50	1,020.0	1,020.7	+1.1	46.4	−1.0	63	28	53	22	1	40	23	522	40	86	4.54	+.5	1.22	14	13.5	n.	34	n.	18	7	9	12	5.6	.0	.0	1
Raleigh [1]	376	5	99	1,006.8	1,021.0	+1.4	44.8	+1.6	75	16	54	13	1	35	32	563	34	76	4.64	+.7	1.23	16	7.8	w.	24	sw.	27	12	4	12	5.6	.0	.0	0
Wilmington	72	73	107	1,018.3	1,021.3	+1.3	50.7	+2.8	78	27	60	19	1	42	33	407	42	80	3.38	+.1	1.19	14	10.6	sw.	35	sw.	13	12	5	11	5.4	.0	.0	0
Charleston [2]	48	11	92	1,019.0	1,021.0	+1.0	54.0	+1.6	78	27	61	26	1	47	21	314	44	82	4.02	+1.0	1.63	12	10.6	sw.	27	s.	22	10	8	10	5.4	.0	.0	0
Columbia, S. C. [2]	347	70	91	1,007.8	1,020.7	+1.1	51.2	+3.0	79	17	61	20	1	41	37	394	40	75	2.92	−.8	.90	13	8.5	ne.	30	sw.	17	9	7	12	5.9	.0	.0	0
Greenville, S. C. [1]	1,040	18	36	982.4	1,020.7	.....	46.4	+3.1	73	16	55	18	1	38	29	517	36	74	5.99	+.8	2.25	14	9.3	sw.	34	sw.	17	5	6	17	7.4	.0	.0	2
Augusta [2]	182	62	77	1,013.9	1,020.7	+.7	53.0	+3.1	80	27	63	21	1	43	33	349	40	72	3.54	−.6	1.02	12	6.0	w.	25	nw.	17	8	3	17	6.6	.0	.0	0
Savannah [2]	65	73	152	1,015.2	1,021.7	+1.7	57.8	+3.8	83	28	67	28	1	48	30	240	46	80	2.81	−.3	1.34	8	11.3	sw.	29	sw.	22	12	7	9	5.3	.0	.0	0
Jacksonville [2]	43	86	110	1,020.0	1,021.7	+1.7	62.1	+4.1	83	22	72	30	1	53	28	142	50	78	.90	−2.1	.68	6	8.5	s.	25	sw.	13	10	11	7	4.9	.0	.0	0
Florida Peninsula							69.4	+2.6										81	0.42	−1.5											3.2			
Key West [2]	21	10	64	1,019.3	1,020.3	+2.0	73.1	+2.6	82	18	78	57	2	68	16	11	64	81	.09	−1.2	.05	3	9.6	e.	22	e.	26	26	1	1	2.1	.0	.0	0
Miami [2]	23	242	249	1,019.6	1,020.7	+1.4	69.2	+1.2	78	18	74	45	2	64	28	41	60	83	.41	−1.6	.38	4	13.7	se.	31	se.	21	18	10	0	2.9	.0	.0	0
Tampa [1]	35	6	43	1,019.6	1,021.3	+2.0	65.8	+3.9	83	20	74	36	2	57	27	74	56	80	.75	−1.8	.62	3	9.9	sw.	29	sw.	6	8	14	6	4.1	.0	.0	0
East Gulf							54.5	+3.2										81	5.28	+0.5											6.8			
Atlanta [1]	1,173	33	72	978.0	1,020.3	+.3	48.7	+3.4	77	16	58	16	1	40	33	463	38	74	6.17	+1.1	1.63	14	11.6	nw.	35	nw.	22	5	4	19	7.4	.0	.0	1
Macon [2]	370	79	87	1,007.1	1,020.7	+.7	53.2	+3.9	77	15	63	21	1	43	35	338	43	77	4.77	+.3	1.43	15	6.6	s.	16	sw.	13	7	6	15	6.5	.0	.0	1
Thomasville	273	49	58	1,010.5	1,021.0	+1.0	58.9	+3.9	83	28	71	28	1	47	39	192	...	...	3.31	−1.2	1.12	8	...	...	...	...	...	6	8	14	...	.0	.0	3
Apalachicola	35	11	51	1,019.0	1,020.3	.....	59.4	+3.1	76	18	66	31	1	53	22	174	53	84	2.87	−1.0	1.27	12	8.9	s.	23	s.	21	7	11	10	5.5	.0	.0	4
Pensacola	56	54	79	1,018.0	1,020.3	+.7	58.3	+3.1	78	27	66	32	1	51	24	211	52	85	2.76	−1.6	1.01	8	7.8	se.	24	w.	13	7	9	12	6.0	.0	.0	1
Anniston	741	9	...	...	...	...	49.5	+3.6	78	16	59	17	1	40	34	439	...	...	6.66	+1.2	1.98	13	...	nw.	...	...	...	7	3	18	...	.0	.0	3
Birmingham [1]	700	5	62	994.6	1,020.3	+.3	49.5	+3.0	77	15	59	18	1	40	36	442	42	82	7.76	.....	2.71	15	9.8	n.	30	nw.	21	4	5	19	7.6	.0	.0	5
Mobile [2]	57	86	161	1,018.0	1,020.0	+.4	57.7	+3.0	77	17	66	31	1	49	29	228	50	86	2.81	−2.5	1.03	13	6.7	s.	23	s.	13	7	4	17	6.9	.0	.0	2
Montgomery [1]	218	92	105	1,012.5	1,020.7	+.7	54.7	+3.1	83	27	64	26	1	45	31	308	46	84	5.73	+.3	2.30	14	8.0	s.	26	w.	22	5	6	17	7.1	.0	.0	6
Meridian [2]	375	67	92	1,005.8	1,020.0	+.4	52.0	+2.4	80	26	62	23	1	42	35	380	44	82	10.65	+5.2	3.04	11	7.5	s.	34	n.	12	5	9	14	7.0	.0	.0	4
Vicksburg [2]	247	82	102	1,009.8	1,018.6	+.7	53.3	+1.5	80	16	63	27	1	44	33	337	44	81	6.95	+2.1	1.93	12	10.1	n.	25	n.	5	3	6	19	7.6	.0	.0	3
New Orleans [4]	53	50	84	1,016.9	1,019.0	.0	60.8	+4.5	81	15	69	35	1	52	26	177	52	78	5.41	+1.2	1.77	10	7.6	sw.	22	se.	12	7	4	17	6.4	.0	.0	2
West Gulf							54.5	+2.0										80	5.08	+2.4											6.8			
Shreveport [1]	249	5	64	1,008.8	1,018.3	−.7	52.6	+2.7	83	14	62	30	6	43	33	364	44	79	5.02	+1.7	1.80	13	11.1	e.	34	s.	21	6	4	18	7.4	.0	.0	5
Fort Smith	463	57	82	1,001.4	1,018.0	−1.3	43.6	+.8	78	15	51	26	8	36	33	601	36	78	8.54	+6.0	3.49	11	10.1	e.	27	w.	21	4	5	19	7.7	4.2	1.9	4
Little Rock [1]	357	26	58	1,006.1	1,019.3	−.3	43.5	−1.4	79	15	52	25	2	35	38	603	36	78	7.41	+3.6	3.09	16	9.5	ne.	27	se.	21	4	5	19	7.9	.3	.0	3
Austin [1]	605	10	41	995.3	1,016.9	.....	54.8	+1.4	81	14	65	33	23	45	34	296	46	78	3.94	+1.6	1.55	12	10.4	s.	34	s.	25	9	1	18	6.4	.0	.0	3
Brownsville	57	5	54	1,012.9	1,014.9	.....	66.8	+4.2	89	13	78	43	23	58	30	58	60	84	.50	−1.0	.19	6	12.0	s.	34	s.	20	7	9	12	6.1	.0	.0	1
Corpus Christi [1]	20	4	33	1,015.2	1,015.9	−1.7	62.0	+5.3	87	13	72	39	8	53	37	123	56	83	2.37	.....	1.06	14	13.9	se.	40	se.	20	9	5	14	6.1	.0	.0	3
Dallas [1]	512	5	45	998.6	1,017.6	.....	50.2	+.2	78	14	60	30	27	40	37	419	40	76	7.68	+5.4	2.73	11	12.1	s.	33	s.	9	4	8	16	7.3	.0	.0	5
Fort Worth [1]	679	40	56	992.9	1,017.6	−.7	49.6	+2.3	80	14	59	28	28	40	37	458	40	75	6.96	+5.2	2.60	12	12.6	nw.	33	nw.	7	4	7	17	7.3	T	.0	6
Galveston [2]	54	106	114	1,015.2	1,017.3	−1.0	59.0	+2.7	71	14	64	40	28	54	25	175	54	88	4.45	+1.6	2.39	8	12.4	s.	30	nw.	5	5	7	16	6.8	.0	.0	3
Houston [3]	138	157	180	1,012.2	1,017.3	.....	59.0	+3.1	79	14	67	40	28	51	29	195	53	85	2.38	−.8	1.18	9	12.1	se.	30	nw.	21	7	7	16	6.3	.0	.0	3
Palestine	510	64	72	999.3	1,017.6	−1.0	53.5	+2.3	83	14	63	33	28	44	31	338	44	73	3.14	+.1	.96	10	9.2	s.	26	w.	21	7	5	16	6.5	.0	.0	3
Port Arthur	34	59	134	1,016.6	1,017.6	.....	58.8	+1.7	75	15	66	40	6	52	25	190	52	86	6.98	+3.4	3.11	9	14.6	s.	38	se.	12	5	9	14	6.5	.0	.0	3
San Antonio [1]	693	8	51	991.9	1,016.3	−1.3	55.6	+.2	82	14	66	32	8	45	38	278	48	78	3.90	+2.2	1.65	14	10.0	ne.	40	nw.	21	10	1	17	6.4	.0	.0	5

See footnotes at end of table.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS—Continued

District and station	Elevation of instruments: Barometer above sea level	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Total degree days	Mean temperature of the dew-point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Wind: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of mont h	Number of days with thunderstorms
	Ft.	*Ft.*	*Ft.*	*Mbs.*	*Mbs.*	*Mbs.*	*°F.*	*°F.*	*°F.*		*°F.*	*°F.*		*°F.*	*°F.*		*°F.*	%	*In.*	*In.*	*In.*		*Mi.*								*0–10*	*In.*	*In.*	
Ohio Valley and Tennessee							**36.5**	**+1.4**										**80**	**5.16**	**+1.7**											**7.5**			
Chattanooga [1]	762	6	66	992.2	1,020.7	+.4	44.1	+1.9	76	15	54	12	1	34	39	588	36	78	7.87	+3.0	3.30	13	8.4	ne.	34	w.	7	3	5	20	7.7	T	.6	4
Knoxville [1]	995	27	53	984.1	1,021.0	+1.0	43.5	+2.7	74	15	53	10	1	34	35	598	34	78	7.03	+2.5	2.43	13	8.7	ne.	42	sw.	22	3	6	19	7.6	T	.0	2
Memphis [4]	399	5	86	1,004.4	1,019.3	−.3	44.2	+1.2	75	15	52	22	1	36	35	584	36	78	5.48	+1.1	1.56	13	8.8	e.	27	w.	22	3	5	20	8.0	T	.0	2
Nashville [1]	546	5	72	1,000.0	1,020.0	.0	41.8	+.2	77	15	51	10	1	33	35	649	34	78	7.50	+3.4	2.72	12	9.8	ne.	30	sw.	15	5	4	19	7.4	T	.0	5
Lexington	980	4	28	983.4	1,020.7	+1.1	36.2	+.8	76	15	46	−5	1	26	33	805	29	80	6.25	+2.6	2.83	15		s.				6	5	17	6.9	.8	T	2
Louisville [3]	525	106	120	1,001.0	1,020.7	+1.1	37.4	+.2	74	15	46	5	1	29	29	775	29	78	5.68	+2.1	3.13	12	9.0	n.	35	sw.	15	6	7	15	6.9	2.1	.0	1
Evansville [1]	431	11	40	1,004.1	1,020.3	+.7	36.0	+1.1	69	15	44	−1	1	28	32	811	30	80	6.33	+3.1	3.13	11	8.9	nw.	29	sw.	22	2	7	19	8.0	1.5	.0	2
Indianapolis [1]	823	5	54	988.8	1,020.3	+1.0	32.0	+1.7	65	15	40	−6	1	24	31	927	26	82	2.59	----	.87	12	10.5	se.	38	w.	22	3	6	19	7.8	2.6	T	0
Terre Haute [2]	575	68	149	999.0	1,020.7	----	34.6	+2.5	71	15	42	1	1	27	35	850	27	80	2.74	+.1	.93	10	9.8	s.	28	sw.	15	3	6	19	7.6	5.0	.2	0
Cincinnati [2]	627	11	51	997.0	1,021.0	+1.7	34.4	+1.6	73	15	43	1	1	25	33	858	26	80	5.43	+2.4	2.41	13	7.9	w.	29	sw.	22	8	5	15	6.6	6.1	T	1
Columbus [2]	822	90	110	989.5	1,020.7	+1.7	32.8	+2.1	68	15	40	4	1	26	29	903	26	81	3.14	+.5	1.31	9	10.0	s.	40	sw.	22	3	8	17	7.4	.6	T	0
Dayton [1]	1,003	6	55	982.7	1,020.3	----	30.2	+.3	63	15	38	0	1	22	30	976	25	82	2.71	.0	1.05	10	11.5	nw.	42	sw.	22	6	3	19	7.4	1.3	T	0
Elkins [1]	1,947	4	45	949.2	1,021.0	+1.7	33.5	+2.5	69	15	44	0	4	23	48	884	28	86	4.26	+1.2	1.27	14	8.2	w.	34	w.	28	3	6	19	7.5	6.7	T	1
Parkersburg	637	77	84	996.6	1,020.7	+1.4	35.0	+.8	75	15	44	5	1	26	41	841	27	76	5.07	+1.9	2.89	12	6.8	sw.	23	sw.	28	4	7	17	7.3	5.4	T	2
Pittsburgh [1]	842	39	54	988.5	1,020.0	+1.0	31.9	+2.1	65	15	40	8	1	24	31	929	24	78	2.78	+.2	.86	17	11.1	w.	42	sw.	22	2	6	20	7.9	3.8	T	0
Lower Lakes							**26.8**	**+2.7**										**84**	**2.12**	**−0.4**											**8.1**			
Buffalo [1]	768	34	96	989.5	1,019.0	+1.0	26.2	+2.5	52	22	33	4	4	20	26	1,089	22	86	3.04	+.1	.67	16	15.3	w.	47	w.	22	0	7	21	8.5	23.3	6.8	1
Canton	448	10	61	1,000.7	1,018.0	----	19.8	+4.0	50	22	28	−7	4	12	33	1,261	17	90	2.02	−.2	.58	17	9.8	w.	30	w.	16	3	8	17	7.7	11.2	8.8	1
Oswego	335	71	85	1,005.8	1,019.0	+1.0	26.8	+4.1	48	22	32	12	1	22	20	1,072	20	77	2.78	+.1	.61	17	10.8	se.	29	se.	22	2	3	23	8.2	26.7	6.5	2
Rochester [1]	523	5	69	999.0	1,019.3	+1.3	25.1	+2.2	49	22	32	−3	4	18	33	1,115	20	82	2.31	−.4	.44	17	12.7	w.	47	sw.	22	1	10	17	7.9	13.9	4.9	1
Syracuse [1]	596	5	57	995.9	1,019.0	+.7	26.3	+3.4	51	22	33	5	13	19	28	1,083	22	83	2.56	−.2	.58	20	11.2	sw.	33	s.	22	1	4	23	8.2	14.7	7.7	1
Erie [2]	714	57	81	992.9	1,020.3	+2.0	28.6	+1.7	54	22	35	10	18	23	24	1,020	24	90	2.47	−.1	.55	16	9.4	w.	32	se.	21	1	5	22	8.4	14.0	1.4	1
Cleveland [1]	762	27	54	990.9	1,020.0	+1.7	29.4	+3.1	53	22	37	10	3	22	27	997	25	86	1.67	−.8	.58	15	11.5	sw.	46	sw.	22	2	5	21	8.1	8.6	1.0	0
Sandusky	629	5	67	995.9	1,020.0	+1.7	29.8	+2.4	53	15	38	8	3	23	26	986	----	----	1.57	−.6	.57	14	9.6	w.	30	sw.	22	4	3	21	7.8	7.3	1.5	0
Toledo [1]	628	5	47	995.9	1,020.7	+2.4	27.4	+1.4	49	22	35	6	3	20	26	1,051	24	85	1.29	−.8	.71	11	11.5	w.	38	sw.	22	2	4	22	8.3	6.4	1.4	0
Fort Wayne [1]	857	5	33	987.1	1,019.6	----	28.0	+1.4	52	22	36	0	2	20	26	1,034	24	84	1.68	−.7	.85	15	9.5	w.	33	sw.	15	2	6	20	7.9	6.4	1.0	0
Detroit [1]	730	5	78	991.9	1,019.6	+1.6	27.8	+3.0	49	22	34	10	18	22	23	1,046	23	82	1.89	−.3	.97	13	10.8	nw.	33	nw.	15	3	6	19	8.0	7.7	1.6	1
Upper Lakes							**21.8**	**+3.5**										**82**	**1.69**	**0.0**											**6.9**			
Alpena	609	5	89	994.6	1,018.6	+1.7	21.3	+3.3	41	22	30	0	12	13	27	1,230	18	84	1.63	−.1	.37	13	11.2	nw.	38	w.	15	5	6	17	7.1	19.4	5.0	0
Escanaba	612	51	72	994.6	1,018.6	+.6	18.4	+3.0	37	25	28	−11	17	9	31	1,301	14	84	2.37	+.9	.68	12	9.8	s.	32	nw.	15	8	4	16	6.4	21.4	23.0	0
Grand Rapids [3]	707	70	244	992.2	1,019.0	+1.4	27.9	+4.2	49	25	34	7	3	22	27	1,039	21	86	1.54	−.7	.84	11	10.8	w.	37	sw.	22	3	7	18	7.4	8.6	T	0
Lansing [3]	878	5	90	985.8	1,019.3	----	25.4	+2.5	46	25	32	0	3	18	25	1,109	20	82	1.34	−.6	.60	11	8.9	w.	26	sw.	22	4	5	19	7.4	8.7	T	0
Marquette	734	44	73	989.5	1,018.0	+.4	20.7	+4.4	46	28	28	−9	17	13	31	1,242	14	79	2.19	+.3	.74	12	7.9	w.	26	nw.	15	7	5	16	6.8	21.0	18.0	1
Sault Sainte Marie [1]	614	11	52	993.9	1,018.0	+1.1	16.8	+5.4	35	28	26	−4	3	8	30	1,351	14	88	1.85	+.4	.48	201	2.2	w.	42	w.	15	4	4	20	7.7	21.7	26.7	0
Chicago [1]	673	5	36	994.2	1,019.6	+1.0	28.8	+3.9	53	25	35	−4	1	22	25	1,014	22	81	1.18	−.9	.68	10	9.8	nw.	28	w.	15	5	4	19	7.5	4.3	.0	0
Green Bay	617	90	123	995.3	1,019.3	+1.3	19.0	+1.6	40	25	28	−10	17	10	29	1,292	12	73	2.23	+.7	.78	10	9.7	s.	29	w.	15	8	7	13	6.1	21.7	1.4	0
Milwaukee [1]	681	33	66	993.2	1,019.3	+1.3	24.7	+3.5	47	25	32	−4	17	18	24	1,126	18	79	1.40	−.4	.73	9	12.4	nw.	37	w.	15	5	8	15	7.0	6.7	T	0
Duluth [3]	1,133	5	47	974.9	1,018.3	−.3	14.6	+3.2	42	24	24	−19	17	6	33	1,407	10	88	1.19	+.1	.35	10	12.5	w.	44	nw.	25	11	6	11	5.3	12.1	10.3	0
North Dakota							**15.2**	**+7.8**										**80**	**0.46**	**0.0**											**5.6**			
Fargo [1]	940	5	43	982.7	1,019.3	−.3	13.6	+5.5	38	8	24	−19	17	3	39	1,440	11	88	.87	+.2	.29	13	12.0	s.	34	nw.	9	6	10	12	6.1	8.4	7.0	0
Bismarck [1]	1,677	5	43	955.6	1,019.0	−1.0	16.7	+8.2	46	8	27	−17	7	6	38	1,352	12	82	.21	−.2	.15	3	10.7	nw.	31	nw.	9	10	6	12	5.5	4.2	1.0	0
Devils Lake	1,478	11	44	962.4	1,019.0	−.6	12.2	+7.1	42	8	22	−17	17	3	32	1,478	7	78	.35	−.2	.29	4	9.4	nw.	33	nw.	9	9	8	11	6.1	5.0	1.2	0
Grand Forks [1]	832	4	41	986.5	1,019.0	----	12.2	----	41	8	23	−18	17	1	35	1,473	9	----	.71	----	.42	6	----	nw.	----	----	----	----	6	10	12	----	6.5	1.0	0
Williston	1,878	42	50	947.9	1,017.6	−2.0	18.4	+10.3	47	8	29	−15	18	8	40	1,308	12	74	.41	.0	.33	4	8.0	w.	31	nw.	9	7	10	11	5.7	3.7	.7	0
Upper Mississippi							**27.1**	**+2.7**										**81**	**2.01**	**+0.3**											**7.2**			
Minneapolis-St. Paul [1]	919	43	74	983.7	1,019.0	.0	17.7	+1.8	46	24	28	−11	18	8	35	1,326	14	86	1.84	+.9	.51	10	10.2	w.	33	nw.	15	8	7	13	6.1	15.4	3.5	0
La Crosse [1]	714	5	29	991.9	1,019.3	+.7	18.0	+1.0	45	14	29	−18	1	7	38	1,317	14	86	2.30	+1.2	.54	12	8.3	se.	34	w.	10	5	10	13	6.7	15.0	5.4	0
Madison [3]	974	70	78	982.4	1,020.0	+1.7	22.3	+3.2	47	14	29	−5	17	16	25	1,197	16	79	1.30	−.2	.56	9	7.9	nw.	26	nw.	15	7	8	13	6.6	9.4	4.7	0
Charles City	1,015	10	51	981.7	1,020.3	+1.0	20.0	+2.9	44	14	29	−15	1	11	34	1,260	----	----	1.91	+.8	.80	13	6.4	nw.	19	nw.	15	8	5	15	6.7	20.8	6.8	0
Moline [1]	606	6	50	997.0	1,021.0	+1.7	27.7	+4.2	52	24	35	−5	1	21	31	1,044	22	80	.90	−.7	.46	9	9.8	w.	32	nw.	15	4	5	19	7.6	4.3	T	0
Des Moines [3]	860	5	99	987.5	1,020.0	+.4	27.4	+3.7	55	14	35	−2	1	20	28	1,052	22	80	1.41	+.3	.84	9	9.0	se.	32	n.	15	6	5	17	7.1	11.5	.5	0
Dubuque	699	60	79	993.6	1,020.3	+1.3	25.0	+2.8	47	9	32	−4	1	18	29	1,124	20	80	1.47	+.1	.54	9	5.6	nw.	20	nw.	15	5	8	15	6.9	9.8	.3	0
Burlington [1]	702	4	36	993.6	1,020.0	+.4	27.8	+1.4	53	24	35	−9	1	20	28	1,040	22	80	.95	−.8	.57	6	10.4	nw.	36	nw.	15	2	7	19	7.9	3.0	.0	0
Cairo	357	5	99	1,006.8	1,020.0	.0	40.0	+1.5	72	15	48	11	1	32	33	701	----	----	5.92	+2.8	1.79	13	9.2	ne.	30	sw.	15	4	3	21	7.9	.1	T	2
Peoria [1]	609	6	26	997.3	1,020.3	+1.0	29.6	+4.7	56	15	36	−3	1	23	28	991	24	83	1.24	−.8	.79	7	9.7	nw.	28	w.	22	1	6	21	8.2	3.0	.4	0
Springfield, Ill. [3]	636	5	191	996.3	1,020.3	+1.0	33.3	+3.8	66	15	40	2	1	27	30	884	26	84	1.32	−1.0	.72	10	11.6	s.	32	e.	21	3	8	17	7.8	3.7	1.5	0
St. Louis [3]	568	35	303	999.0	1,020.0	+.4	36.2	+1.4	74	15	44	8	1	29	34	807	26	75	3.57	+1.0	1.29	11	11.5	nw.	33	sw.	15	3	8	17	7.3	8.4	T	1
Missouri Valley							**30.6**	**+4.1**										**79**	**1.64**	**+0.4**											**7.1**			
Columbia, Mo. [3]	784	6	66	990.5	1,020.0	+.4	34.1	+1.7	66	14	42	6	18	26	34	863	25	74	2.50	+.5	1.07	8	8.1	se.	21	nw.	15	6	7	15	6.9	13.3	.0	1
Kansas City [1]	963	39	76	983.4	1,019.3	−.3	35.0	+3.8	67	14	43	14	26	27	33	840	26	73	.85	−.6	.53	9	10.7	nw.	30	nw.	15	5	4	19	7.7	3.6	T	0
St. Joseph [3]	967	11	49	983.4	1,020.0	----	33.5	+3.9	65	14	41	13	1	26	34	880	26	76	1.47	−.2	.96	10	9.0	nw.	26	nw.	15	10	5	13	6.0	5.2	.0	0
Springfield, Mo. [1]	1,324	5	67	970.2	1,019.0	−.6	35.6	+1.6	71	9	44	16	1	27	34	825	29	81	4.28	+1.9	2.01	12	12.4	se.	31	w.	22	4	6	18	7.5	1.8	.6	0
Topeka	987	65	87	982.4	1,019.0	----	34.8	+3.8	67	14	43	14	26	27	33	843	26	74	1.27	−.2	.82	7	9.1	s.	30	nw.	15	4	5	19	7.7	6.7	T	0
Lincoln [2]	1,189	11	81	975.3	1,020.0	+.7	31.3	+3.5	66	14	39	11	26	23	34	944	24	84	2.02	+1.1	1.23	11	9.0	s.	33	nw.	15	3	6	19	7.7	15.0	T	0
Omaha [1]	1,105	5	68	978.3	1,019.6	.0	28.8	+4.5	60	14	38	4	27	20	32	1,016	24	84	1.26	+.4	.73	8	11.3	se.	34	nw.	15	2	8	18	7.9	16.2	3.8	3
Valentine	2,598	46	54	923.5	1,018.6	−.4	26.0	+4.6	56	14	37	−8	17	15	34	1,090	20	76	.60	.0	.23	8	8.8	w.	26	n.	21	5	6	17	6.8	8.4	T	0
Sioux City [1]	1,138	5	40	976.6	1,019.6	−.4	25.2	+4.8	56	14	35	−5	5	15	40	1,114	20	82	1.43	+.6	.86	8	10.1	nw.	31	n.	25	6	7	15	6.8	8.6	.5	0
Huron [1]	1,301	5	41	970.2	1,019.3	−.7	21.8	+7.5	48	24	32	−6	18	12	34	1,209	18	85	.69	+.2	.28	10	12.4	nw.	33	n.	15	8	11	9	5.8	4.6	T	0

See footnotes at end of table.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS—Continued

District and station	Elevation of instruments: Barometer above sea level	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Total degree days	Mean temperature of the dew-point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Wind: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
	Ft.	*Ft.*	*Ft.*	*Mbs.*	*Mbs.*	*Mbs.*	°*F.*	°*F.*	°*F*		°*F.*	°*F.*		°*F.*	°*F.*		°*F.*	%	*In.*	*In.*	*In.*		*Mi.*							*0–*	*10*	*In.*	*In.*	
Northern Slope							26.6	+3.9										75	0.56	−0.0											6.9			
Billings [1]	3,570	16	40	889.9	1,017.3	-----	26.7	+2.5	53	8	36	−4	16	17	29	1,072	20	76	.32	------	.14	5	11.6	sw.	42	nw.	11	5	6	17	7.1	6.7	T	0
Havre	2,507	11	67	926.5	1,019.3	+1.0	19.4	+5.8	49	7	31	−17	17	8	54	1,275	14	78	.45	.0	.19	11	8.4	sw.	37	sw.	11	5	9	14	6.4	7.2	T	0
Helena [1]	4,124	5	43	872.0	1,018.6	−1.0	26.7	+5.1	54	7	37	−7	16	16	37	1,074	20	72	.07	−.3	.03	4	8.1	w.	48	w.	11	2	10	16	7.2	1.3	.0	0
Missoula [1]	3,205	4	32	901.5	1,018.6	-----	31.6	+7.8	48	8	40	15	25	24	25	934	26	82	.34	------	.10	13	5.7	n.	36	nw.	11	1	6	21	8.0	4.6	T	0
Kalispell	2,973	48	56	911.3	1,016.9	−1.7	30.0	+6.7	49	8	37	6	16	23	28	981	21	68	.67	−.4	.24	12	5.5	w.	28	sw.	11	4	4	20	7.5	3.0	.0	0
Miles City [1]	2,371	5	78	931.3	1,018.3	−.7	24.0	------	48	11	35	−10	16	13	41	1,150	17	78	.08	------	.03	4	-----	w.	-----	-----	-----	9	7	12	5.9	1.2	T	0
Rapid City [1]	3,259	5	63	900.4	1,018.6	.0	24.6	+2.8	53	8	34	−5	17	15	38	1,132	19	80	.45	.0	.22	8	12.5	nw.	45	nw.	22	4	12	12	6.2	7.0	.4	0
Cheyenne [1]	6,094	5	40	809.3	1,016.6	−.3	27.7	+.4	55	8	38	−9	25	17	41	1,042	19	68	1.03	+.4	.48	11	12.6	w.	38	nw.	8	4	6	18	7.2	10.1	1.8	0
Lander	5,352	60	68	832.4	1,017.6	−1.0	24.0	+1.5	55	8	36	−7	26	12	42	1,148	15	66	.53	−.1	.34	6	4.2	sw.	26	sw.	8	8	11	9	5.5	6.1	10.2	0
Sheridan [1]	3,790	5	38	882.8	1,018.6	-----	23.9	+1.3	57	8	37	−12	17	11	45	1,149	18	77	1.03	+.3	.57	13	7.1	nw.	41	nw.	22	3	13	12	6.8	12.6	4.0	0
North Platte [2]	2,821	11	51	916.0	1,017.6	−.7	31.6	+5.0	68	14	41	7	26	22	40	937	23	76	.29	−.2	.25	6	7.9	s.	30	n.	21	3	6	19	7.9	3.3	.0	1
Middle Slope							36.1	+1.7										74	1.37	+0.4											7.3			
Denver [2]	5,292	106	113	834.7	1,015.2	−1.1	34.7	+2.0	68	8	44	8	26	25	32	847	22	68	.34	−.2	.17	6	7.2	s.	28	w.	8	5	13	10	6.1	4.3	T	0
Pueblo [1]	4,690	5	36	854.4	1,015.9	.0	34.4	+2.3	72	14	47	5	26	22	46	856	26	78	1.10	+.2	.75	7	7.8	se.	32	n.	6	4	4	20	7.9	13.0	.0	0
Concordia	1,392	50	58	967.8	1,019.3	+.3	33.8	+4.0	67	14	42	13	17	26	35	876	26	78	.97	+.2	.71	7	13.7	se.	40	n.	15	3	5	20	8.0	8.2	.2	0
Dodge City [1]	2,509	5	58	927.2	1,117.3	−.7	34.1	+.9	72	14	43	13	27	25	35	865	28	82	.07	−.4	.52	9	14.1	se.	35	n.	6	3	5	20	7.6	4.3	.7	1
Wichita [1]	1,358	6	64	968.5	1,018.3	−.3	35.2	+.8	64	14	43	15	26	27	32	830	28	76	.84	−.4	.52	11	10.0	s.	25	n.	25	6	2	20	7.4	7.1	3.0	4
Oklahoma City [2]	1,214	10	47	973.6	1,018.0	−.3	41.0	+1.4	69	9	50	14	28	32	34	672	32	74	2.91	+1.8	.81	11	10.0	s.	25	n.	6	4	6	18	7.4	4.5	2.0	3
Tulsa [1]	674	10	60	993.2	1,018.0	-----	39.6	+.5	71	15	49	19	28	31	36	711	32	75	2.87	+1.4	1.07	9	11.4	se.	32	s.	6	4	6	18	7.4	4.5	2.0	3
Southern Slope							48.6	+3.4										64	0.59	−0.2											6.2			
Abilene [1]	1,738	4	59	954.3	1,015.9	−1.7	48.8	+2.8	83	15	60	25	26	37	45	455	38	70	.89	−.1	.39	6	14.8	n.	38	nw.	21	5	7	16	7.1	.3	.0	3
Amarillo [1]	3,676	5	42	887.9	1,015.2	−1.4	40.6	+4.5	80	14	54	18	25	28	48	683	30	72	.28	−.4	.14	3	14.0	se.	40	sw.	3	5	7	16	7.0	1.3	.0	0
Del Rio	960	63	71	981.4	1,015.2	−.7	57.4	+1.4	85	14	67	36	27	48	38	229	46	68	.82	+.3	.62	9	10.0	se.	30	nw.	21	11	1	16	5.9	.0	.0	0
Roswell	3,566	75	85	891.3	1,013.5	−1.7	47.6	+5.1	81	14	64	19	22	31	52	487	26	48	T	−.6	T	0	8.5	s.	34	sw.	20	10	13	5	4.9	T	.0	0
Southern Plateau							49.8	+2.1										51	0.44	−0.4											4.8			
El Paso [1]	3,778	39	85	885.2	1,012.9	−1.3	51.5	+2.9	76	15	65	24	23	38	44	379	28	41	.17	−.2	.17	1	11.2	sw.	50	w.	21	13	12	3	3.7	T	.0	0
Albuquerque [1]	5,314	5	45	835.8	1,012.9	-----	43.0	+2.5	70	14	56	22	28	30	35	621	25	52	.32	.0	.23	5	9.5	se.	39	nw.	6	8	10	10	5.9	2.0	.0	2
Flagstaff	6,907	36	51	788.4	1,016.6	+.7	35.0	+4.2	63	8	47	11	22	23	41	838	22	62	.51	−1.6	.17	7	-----	w.	-----	-----	-----	7	11	10	6.0	2.7	.0	0
Phoenix [2]	1,107	39	87	975.6	1,014.9	−.7	56.2	+1.1	80	14	69	34	26	43	36	243	36	57	.12	−.6	.04	4	6.4	e.	22	sw.	20	9	8	11	5.3	.0	.0	1
Tucson [1]	2,555	5	39	925.8	1,014.2	-----	53.6	+1.4	80	14	68	31	22	39	39	315	33	51	.47	−.5	.43	3	-----	se.	-----	-----	-----	10	4	14	5.2	T	.0	1
Yuma	142	9	54	1,010.5	1,014.9	−1.0	59.2	+.6	83	12	72	36	27	46	39	164	33	43	1.05	+.6	1.04	2	6.9	w.	31	nw.	9	19	-----	63	2.9	.0	.0	0
Middle Plateau							36.4	+3.1										67	1.23	+0.4											6.8			
Reno [1]	4,527	20	52	862.9	1,018.0	−.6	37.2	+1.5	65	11	50	14	26	24	40	778	27	67	1.88	+.7	1.18	7	8.7	nw.	59	s.	5	4	10	14	6.9	6.4	T	0
Tonopah	6,090	9	20	812.7	1,016.3	-----	34.9	+.4	61	13	43	16	21	26	26	841	24	69	.49	+.1	.17	7	-----	w.	-----	-----	-----	5	12	11	-----	7.5	2.5	0
Winnemucca	4,339	5	56	868.3	1,018.3	−.7	36.4	+2.9	57	11	45	15	26	28	32	801	27	68	2.75	+1.8	1.44	11	8.1	sw.	36	w.	8	4	10	14	7.0	.7	.0	1
Winnemucca	4,339	5	56	868.3	1,018.3	−.7	36.4	+2.9	57	11	45	15	26	28	32	801	27	68	2.75	+1.8	1.44	11	8.1	sw.	36	w.	8	4	10	14	7.0	.7	.0	1
Modena	5,473	10	46	832.4	1,014.9	−2.4	34.6	+3.6	63	13	45	10	26	24	35	849	-----	-----	52	−.4	.19	4	9.5	sw.	32	nw.	14	6	15	7	5.7	6.7	.0	1
Salt Lake City [1]	4,227	32	58	867.3	1,017.6	−1.0	36.4	+4.3	60	8	44	15	26	28	27	801	28	70	1.19	.0	.40	10	8.6	s.	31	s.	2	5	5	18	7.2	2.2	.0	1
Grand Junction	4,602	60	68	858.5	1,014.6	−2.7	38.8	+5.9	63	14	48	16	26	29	32	734	24	59	.53	.0	.26	7	5.3	se.	27	sw.	18	2	8	18	7.4	.2	.0	0
Northern Plateau							36.9	+4.8										76	1.50	+0.1											7.6			
Baker [2]	3,471	36	54	896.4	1,019.3	−.7	34.0	+5.0	52	8	41	15	19	27	28	867	27	77	1.18	.0	.28	13	5.8	se.	23	sw.	5	4	5	19	7.4	6.7	.0	0
Boise [1]	2,739	5	49	921.4	1,019.0	−1.0	37.6	+4.0	52	3	45	20	21	30	24	766	30	75	2.17	+.7	.58	13	10.3	se.	34	nw.	20	5	7	16	7.1	.3	.0	0
Pocatello [1]	4,478	5	31	863.2	1,019.3	.0	33.2	+6.3	50	8	41	4	21	26	30	888	25	73	.95	−.2	.42	10	11.4	sw.	42	s.	2	4	4	20	7.8	5.5	.0	0
Spokane [1]	1,929	27	42	947.9	1,018.0	−1.0	35.1	+3.8	52	7	42	18	16	28	23	837	30	80	.95	−.8	.22	11	6.5	sw.	34	sw.	11	1	6	21	8.3	.9	.0	0
Walla Walla	991	57	65	982.7	1,019.0	−.6	41.8	+4.7	63	7	49	20	19	35	24	646	-----	-----	2.20	+.4	.48	15	6.2	sw.	24	w.	5	3	9	16	7.3	2.7	.0	0
Yakima	1,076	58	67	978.7	1,018.0	-----	39.6	+5.1	61	8	48	20	19	31	27	709	-----	-----	1.52	+.5	.51	14	4.9	nw.	25	w.	11	3	9	16	7.6	1.9	.0	0
North Pacific Coast							44.7	+2.5										79	5.80	+0.5											8.1			
North Head	211	5	55	1,010.8	1,018.3	+.3	44.6	+1.6	53	7	49	33	19	40	14	572	40	84	8.02	+.6	1.42	24	16.4	n.	63	s.	7	4	2	22	8.0	.0	.0	0
Seattle [2]	125	90	321	1,013.9	1,018.3	+.3	44.7	+1.9	58	7	49	32	19	40	17	568	38	79	5.66	+1.8	2.69	20	9.9	s.	37	sw.	19	4	4	20	8.1	T	.0	0
Tacoma	194	172	201	1,011.5	1,018.3	+.3	43.5	+2.9	58	7	49	29	19	38	21	604	-----	-----	5.71	+1.0	2.13	19	8.7	s.	34	sw.	11	2	6	20	8.2	.6	.0	0
Tatoosh Island	86	9	61	1,014.2	1,017.3	+1.4	44.6	+3.6	52	7	48	35	19	41	11	509	39	80	7.76	−1.7	2.59	17	17.2	e.	58	s.	6	4	5	19	7.5	.0	.0	0
Medford [1]	1,329	29	58	971.9	1,020.3	-----	43.3	+1.0	61	7	53	22	28	34	35	608	35	74	3.90	+1.9	.96	14	-----	-----	-----	-----	-----	2	8	18	7.7	T	.0	0
Portland, Oreg. [2]	154	68	106	1,013.9	1,019.3	+.7	45.8	+3.7	60	7	51	32	19	41	24	534	38	80	5.25	−.1	1.22	20	6.9	nw.	22	sw.	7	1	1	26	9.0	T	.0	0
Roseburg	510	45	76	1,001.7	1,020.3	+1.0	46.1	+2.7	65	7	54	29	25	38	30	527	38	75	4.29	−.2	.97	18	3.8	s.	34	sw.	5	0	6	22	8.3	T	.0	0
Middle Pacific Coast							51.7	+2.0										72	4.80	+0.5											5.8			
Eureka	60	72	88	1,019.3	1,021.0	+1.4	48.6	+1.4	62	6	54	35	25	43	21	459	44	80	9.55	+3.1	4.20	16	9.3	n.	35	sw.	4	6	8	14	6.6	.0	.0	1
Red Bluff [1]	353	6	26	1,005.8	1,018.3	-----	51.6	+2.2	69	11	61	32	26	42	30	377	36	59	1.74	−2.2	.48	8	10.2	nw.	37	se.	2	9	5	14	6.0	.0	.0	2
Sacramento	66	92	115	1,016.3	1,018.6	−.4	52.2	+2.1	68	12	61	35	28	43	29	361	41	71	4.49	+1.5	2.74	8	9.0	s.	29	s.	1	9	9	10	5.2	.0	.0	1
San Francisco [2]	155	112	132	1,013.5	1,019.0	−.3	54.4	+2.2	66	9	60	44	19	49	16	302	44	76	3.43	−.4	2.29	9	8.4	w.	32	sw.	1	10	9	9	5.3	.0	.0	0
South Pacific							54.7	+1.1										69	2.52	+0.4											5.9			
Fresno [1]	327	5	34	1,006.8	1,019.0	−.4	50.8	+.5	67	13	61	32	24	40	29	396	43	76	2.31	+.9	1.03	6	4.7	se.	34	nw.	27	4	11	13	6.4	.0	.0	2
Los Angeles	338	223	250	1,005.8	1,017.6	−.4	56.6	+1.1	80	10	64	40	20	49	29	244	42	63	3.34	+.3	1.37	9	7.3	w.	34	nw.	9	8	11	9	5.5	.0	.0	3
San Diego [1]	87	20	55	1,014.9	1,017.6	−.4	56.8	+1.7	79	10	66	41	20	48	30	232	46	69	1.91	−.1	.73	8	6.3	w.	19	s.	2	6	12	10	5.9	.0	.0	1
West Indies																																	
San Juan, P. R.	82	10	54	1,014.2	1,018.0	-----	74.3	−.6	80	2	78	68	3	71	12	0	68	82	3.64	+.9	1.75	17	14.7	e.	30	e.	26	1	23	4	6.1	.0	.0	0
Panama Canal																																	
Balboa Heights	118	6	92	-----	[3]1,011.2	.0	81.4	+1.1	92	19	90	71	4	73	20	0	70	[4]74	.11	−.5	.11	1	9.8	nw.	24	nw.	25	16	12	0	3.1	.0	.0	0
Cristobal	27	47	97	-----	[3]1,012.2	.0	80.6	+.2	84	28	84	74	17	77	10	0	71	[4]74	.87	−.7	.28	10	16.5	ne.	26	ne.	24	10	17	1	4.2	.0	.0	0

See footnotes at end of tables.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS—Continued

District and station	Elevation of instruments: Barometer above sea level	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Total degree days	Mean temperature of the dew-point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Wind: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
Alaska	*Ft.*	*Ft.*	*Ft.*	*Mbs.*	*Mbs.*	*Mbs.*	°F.	°F.	°F.		°F.	°F.		°F.	°F.		°F.	%	*Ins*	*In.*	*In.*		*Mi.*					*0–10*	*In.*	*In.*		
Anchorage [1]	132	6	44	999.7	1,004.7	-----	21.5	+2.9	52	23	30	−29	13	13	31	1,218	18	78	1.13	+.5	.43	13	6.5	n.	37	se.	23	4	6	18	7.5	15.2	8.4	0
Fairbanks [1]	455	5	63	990.9	1,008.8	-----	5.6	+6.8	48	23	16	−44	13	−4	36	1,660	2	80	.27	−.2	.17	6	5.1	n.	34	sw.	23	6	5	17	7.0	4.0	7.8	0
Juneau [1]	80	6	32	1,008.8	1,011.9	-----	31.5	-----	45	22	36	0	14	27	21	937	26	79	3.17	-----	.61	19	9.9	se.	30	se.	20	1	3	24	8.6	6.7	.0	0
Nome	22	25	56	1,006.4	1,007.1	-----	10.0	+4.4	34	3	18	−30	11	2	37	1,537	7	83	2.11	+1.3	.72	14	11.4	ne.	44	s.	26	7	6	15	6.4	14.3	23.3	0
Barrow	29	5	27	1,018.3	1,019.0	-----	20.6	−4.1	4	28	−15	−43	10	−26	26	2,398	−20	---	.09	−.1	---	5	10.0	ne.	40	e.	27	12	7	9	4.9	1.6	13.4	0
Bethel	28	5	31	1,001.7	1,003.1	-----	16.2	+6.0	43	26	22	−26	12	10	38	1,366	14	85	.54	+.6	.75	18	14.3	ne.	40	-----	26	6	5	17	6.8	13.0	.2	0
Gambell	32	5	32	1,009.1	1,010.2	-----	−.7	−3.4	33	26	41	−24	12	−6	23	1,838	−2	88	1.35	+.2	.91	11	22.1	ne.	48	n.	6	5	9	14	7.0	13.5	26.9	0
Ketchikan	75	69	90	1,012.2	1,013.2	-----	37.6	+2.4	47	4	42	21	15	33	13	766	32	80	13.81	+2.72	2.81	22	7.3	se.	27	se.	7	0	2	26	9.4	3.4	.0	0
Kotzebue	20	5	31	1,009.8	1,010.5	-----	−.4	+3.6	35	27	7	−43	13	−8	42	1,829	−2	95	.28	.0	-----	7	13.5	se.	50	se.	26	12	3	13	5.0	3.3	12.0	0
McGrath	341	5	31	994.6	1,007.8	-----	5.8	-----	42	27	16	−52	12	−5	39	1,656	4	86	1.41	−.3	.49	14	-----	w.	-----	-----	-----	7	4	17	7.0	13.5	18.1	0
Northway	1,718	5	32	-----	1,011.5	-----	−1.4	-----	35	24	8	−49	14	−11	33	1,860	−3	84	.39	-----	.23	8	4.4	se.	28	-----	1	15	6	17	7.2	6.1	14.2	0
Summit	2,407	5	30	-----	1,007.5	-----	18.6	-----	35	24	19	−35	13	3	29	1,522	8	80	1.00	-----	.27	14	-----	-----	-----	-----	-----	7	2	19	7.2	19.6	56.2	0
Hawaii																																		
Honolulu (January)	38	86	100	1,016.3	1,016.9	-----	72.5	+1.6	80	6	78	63	3	67	14	0	----	----	. 24	−3.5	.12	7	7.3	ne.	26	ne.	22	13	17	1	3.9	.0	.0	0

[1] Data are airport records.
[2] Barometric data (adjusted to old city elevation) and hygrometric data from airport; otherwise city office records.
[3] Observations taken bihourly.
[4] Pressure (adjusted to old city elevation), temperature, and hygrometric data from airport; otherwise city office records.
[5] Temperature and precipitation from city records, other data from airport.

NOTE.—Except as indicated by notes [1], [2], [4], and [5] data in table are city office records.

SEVERE LOCAL STORMS, FEBRUARY 1945

[Compiled by Mary O. Souder]

[The table herewith contains such data as has been received concerning severe local storms that occurred during the month. A revised list of tornadoes will appear in the United States Meteorological Yearbook]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
Nebraska	*1945 Feb.* 3–5	-----	-----	-----	-----	Ice	Utility wires damaged; traffic suspended or considerably slowed down; some accidents reported; loss estimated to be several thousand dollars.
Clovis, N. Mex.	6	-----	-----	-----	$900	Wind	Property damaged.
Meridian, Miss., south to York, Livingston, and Montgomery, Ala.	12	-----	-----	40	-----	Tornado	In Lauderdale County, Miss., 5 persons were killed and 40 injured; in Alabama, 35 deaths and 200 injuries. Property damage in both States reached hundred thousands of dollars. 30 to 40 houses were destroyed in Lauderdale, Miss. The Red Cross reported 1,500 persons homeless in Alabama. The Meridian Weather Bureau Office recorded wind of 40 miles per hour and rainfall as 3.04 inches. At the Airport, wind velocity was recorded at 80 miles per hour and rainfall as 2.90 inches.
Greenville, S. C.	17	p. m.	-----	-----	1,000	Wind	Many trees uprooted and a house demolished by falling trees.
Nebraska, east-central and extreme southeastern portions.	21	-----	-----	-----	-----	Heavy snow	Snowfall 8 to 17 inches deep caused some interruption of a day or more to bus schedules where roads were closed by the Highway Department. Damage not estimated. Area affected about 100 square miles.
Arkansas	26–27	-----	-----	-----	-----	Ice	The freezing rain covered trees, shrubbery, wires, and highways with a thick coating of ice. Many trees uprooted and communication and power lines broken. Telegraph and telephone service severely crippled for several days and bus service on some highways suspended.
Oklahoma	26–28	-----	-----	-----	-----	Sleet, snow, and freezing rain.	Estimated loss in southern Oklahoma of hundred thousand of dollars. In some south-central and southeastern sections the combined weight of heavy falls of sleet and snow caused the collapse of warehouses and other buildings, while the extremely heavy accumulation of freezing rain damaged many trees. Communication and power lines down.

SOLAR RADIATION AND SUNSPOT DATA FOR FEBRUARY 1945

[Solar Radiation Investigations Section, I. F. Hand, in charge]

SOLAR RADIATION OBSERVATIONS

Explanations of the tables and references to descriptions of instruments, stations, and methods of observation, and to summaries of data, are given in the January 1944 REVIEW, page 43. A list of the pyrheliometric stations also is given on page 45 of the same REVIEW.

TABLE 1.—*Solar radiation intensities during February 1945*

GRAM-CALORIES PER MINUTE PER SQUARE CENTIMETER OF NORMAL SURFACE

MADISON, WIS.

Date	Sun's zenith distance: 7:30 a. m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	1:30 p. m.
	75th mer. time	Air mass: A. M. 5.0	4.0	3.0	2.0	*1.0	P. M. 2.0	3.0	4.0	5.0	75th mer. time
	e										e
	mb.	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*
Feb. 1	0.8	0.88	1.03	1.25	.....	1.48	.....	.....	.....	.....	1.7
Feb. 17	0.6	.73	.88	1.04	1.25	1.50	1.25	.....	.....	.....	0.9
Feb. 18	0.6	.....	.90	1.08	1.28	1.53	.....	.....	.....	.....	1.4
Feb. 24	3.0	.74	.86	.98	1.26	.....	.....	.....	.....	.....	5.6
Feb. 27	2.5	.60	.77	.91	.....	.....	.....	.....	.....	.....	3.5
Means	.....	**.74**	**.89**	**1.05**	**1.26**	**1.50**	**(1.25)**	.....	.....	.....	.....
Departures	.....	**−.14**	**−.13**	**−.11**	**−.08**	**−.03**	**−.07**	.....	.....	.....	.....

LINCOLN, NEBR.

Feb. 5	2.0	.....	0.83	1.07	1.11	.....	1.27	.....	.....	.....	3.8
Feb. 10	4.0	0.85	1.04	1.20	1.34	1.50	1.31	.....	.....	.....	4.0
Feb. 14	4.6	.....	.79	.....	.....	.....	.....	.....	.....	.....	7.8
Feb. 22	3.0	.92	1.04	1.20	1.35	1.50	.....	.....	.....	.....	4.6
Means	.....	**(.88)**	**.92**	**1.16**	**1.27**	**(1.50)**	**(1.29)**	.....	.....	.....	.....
Departures	.....	**−.03**	**−.10**	**.00**	**−.08**	**−.01**	**−.05**	.....	.....	.....	.....

ALBUQUERQUE, N. MEX.

Feb. 4	3.4	1.08	1.11	1.20	1.38	.....	.....	1.31	1.30	1.28	3.8
Feb. 5	3.3	1.04	1.10	1.24	1.33	.....	.....	.....	.....	.....	4.6
Feb. 9	3.2	.93	1.04	1.19	1.34	.....	.....	.....	.....	.....	3.2
Feb. 13	3.8	1.01	1.12	1.22	1.32	.....	1.42	1.40	1.39	1.35	4.2
Feb. 14	3.3	.88	1.05	1.19	1.35	.....	1.45	1.38	.....	.....	3.0
Feb. 18	3.3	.90	1.03	1.14	1.33	.....	1.48	1.38	1.33	.....	3.3
Feb. 19	2.7	.94	1.07	1.21	1.38	.....	.....	1.42	1.40	1.38	3.2
Feb. 20	3.3	1.02	1.07	1.17	1.33	.....	.....	.....	.....	.....	3.0
Feb. 22	2.1	1.09	1.17	1.24	1.40	.....	.....	1.43	1.40	1.38	2.5

TABLE 1.—*Solar radiation intensities during February 1945*

ALBUQUERQUE, N. MEX.—Continued

Date	Sun's zenith distance: 7:30 a. m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	1:30 p. m.
	75th mer. time	Air mass: A. M. 5.0	4.0	3.0	2.0	*1.0	P. M. 2.0	3.0	4.0	5.0	75th mer. time
	e										e
	mb.	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*
Feb. 25	2.7	.....	.....	1.09	1.32	.....	.....	.....	.....	.....	3.6
Feb. 26	2.9	.92	1.00	1.11	1.32	.....	1.30	1.29	.....	.....	2.7
Means	.....	**.98**	**1.08**	**1.18**	**1.35**	.....	**1.44**	**1.37**	**1.36**	**1.35**	.....
Departures	.....	**−.03**	**−.03**	**−.02**	**−.01**	.....	**+.05**	**+.11**	**+.13**	**+.17**	.....

BOSTON, MASS.

Feb. 2	1.6	0.88	1.01	1.17	1.35	.....	1.25	1.16	0.97	.....	1.9
Feb. 3	1.9	.....	.....	.....	1.28	.....	.....	.....	.....	.....	3.0
Feb. 5	5.6	.....	.....	.....	.....	.....	1.05	.....	.....	.....	4.4
Feb. 6	2.9	.35	.40	.44	.73	.....	.94	.91	.71	.50	3.0
Feb. 12	3.3	.....	.....	.....	1.06	.....	1.01	.72	.....	.....	3.5
Feb. 19	1.7	.66	.83	.98	1.15	.....	1.19	1.17	.....	.....	2.5
Feb. 27	6.4	.....	.....	.....	.....	.....	1.19	1.19	.....	.....	3.0
Feb. 28	3.0	.....	.46	.86	1.01	.....	.....	.....	.....	.....	3.1
Means	.....	**.63**	**.68**	**.86**	**1.10**	.....	**1.10**	**1.03**	**(.84)**	**(.50)**	.....

BLUE HILL, MASS.

Feb. 1	1.3	0.99	.....	.....	1.39	.....	.....	1.24	1.14	1.05	2.1
Feb. 2	1.7	1.04	1.13	1.23	1.42	.....	1.42	1.27	1.13	1.03	1.8
Feb. 3	1.8	.....	.....	.....	1.41	.....	1.40	1.26	1.14	1.04	2.7
Feb. 4	2.0	1.03	1.13	.....	.....	.....	.....	.....	.....	.....	2.2
Feb. 5	4.6	.....	.....	.....	.....	.....	.....	.93	.78	.68	4.0
Feb. 6	2.6	.96	1.07	1.20	.....	.....	.....	.....	.....	.88	3.3
Feb. 9	3.2	.....	.....	.....	.....	.....	1.24	1.07	.68	.81	3.8
Feb. 18	1.7	.95	1.04	1.15	.....	.....	.....	.....	.....	.....	2.6
Feb. 19	1.7	.86	.99	1.12	1.35	.....	1.38	1.21	1.07	.96	2.4
Feb. 21	3.0	.63	.....	.....	.....	.....	.....	.....	.....	.....	3.5
Feb. 24	3.5	.81	.91	1.03	.....	.....	.....	.....	.....	.....	3.8
Feb. 25	2.6	Record lost			1.36	.....	1.34	.....	.....	.91	3.2
Feb. 27	6.4	.....	.....	.....	.....	.....	1.21	1.00	.84	.75	2.7
Feb. 28	2.7	.94	1.07	1.20	.....	.....	1.39	.....	.....	.....	2.9
Means	.....	**.91**	**1.05**	**1.16**	**1.39**	.....	**1.34**	**1.14**	**.97**	**.90**	.....
Departures	.....	**−.02**	**.00**	**+.05**	**+.09**	.....	**+.05**	**−.01**	**−.05**	**−.02**	.....

RATIO BOSTON/BLUE HILL ON COMPARABLE DATES

	0.66	0.64	0.72	0.91	.....	0.90	(0.94)	(0.86)	(0.87)	.....

*Extrapolated.

TABLE 2.—*Daily totals and weekly means of solar radiation (direct+diffuse) received on a horizontal surface*

[Gram-calories per square centimeter]

Date	Washington, D.C.	Madison, Wis.	Lincoln, Nebr.	East Lansing, Mich.	New York, N.Y.	Fresno, Calif.	Fairbanks, Alaska	Columbia, Mo.	Boston, Mass.	Nashville, Tenn.	Twin Falls, Idaho	La Jolla, Calif.	Riverside, Calif.	Blue Hill, Mass.	Portland, Maine	Ithaca, N.Y.	Newport, R.I.	State College, Pa.	Put-in-Bay, Ohio	East Wareham, Mass.	Davis, Calif.	Boulder, Colo.	Tooele, Utah	Illumination—Boston, Mass.
1945	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	Avg. ft. candles
Jan. 29	261	278	286	126	119	311	22	140	42	262	113	256	311	62	54	70	83	193	180	75	288	172	380	390
Jan. 30	297	259	231	192	199	119	15	201	223	156	95	307	302	246	250	162	243	200	260	293	51	240	192	1,802
Jan. 31	313	318	266	216	237	41	42	328	215	288	103	167	86	257	264	182	237	188	290	257	53	172	152	1,659
Feb. 1	309	327	86	107	275	52	44	208	254	222	63	104	79	307	220	208	284	284	188	319	13	296	104	1,976
Feb. 2	299	220	34	163	289	192	40	126	256	105	28	54	54	300	268	202	286	204	195	331	83	296	120	1,934
Feb. 3	320	161	24	228	292	266	37	43	248	45	114	300	188	296	292	206	230	343	284	310	324	207	240	1,839
Feb. 4	110	128	97	23	168	256	21	43	218	12	238	225	287	301	289	179	285	87	34	304	122	275	379	1,585
Means	272	242	146	151	226	177	31	156	208	156	108	202	186	253	234	173	242	214	204	270	133	237	224	1,598
Departures	+69	+56	−67	+19	+52	−6	−8	−44	+26	−24	−79	−71	−46	+35	.....	+11	+24	+76	+48	+64	−65	.....	.....	.....
Feb. 5	152	280	306	136	246	106	34	50	190	70	64	142	248	199	194	107	199	240	212	194	222	165	256	1,324
Feb. 6	178	154	126	108	181	259	34	190	218	159	276	320	354	298	257	308	293	302	112	313	336	165	421	1,580
Feb. 7	176	147	236	23	181	332	21	26	163	150	102	370	390	208	247	129	252	143	67	197	269	253	312	1,269
Feb. 8	109	248	270	123	36	292	27	307	8	33	70	374	387	29	92	82	16	82	114	26	229	285	284	85
Feb. 9	245	264	218	100	234	233	27	195	263	331	286	376	418	304	233	66	310	119	110	.....	373	86	286	2,108
Feb. 10	233	330	332	118	152	353	36	361	99	62	209	386	400	141	149	112	205	134	77	.....	358	154	430	901
Feb. 11	328	272	293	217	259	331	35	350	265	324	159	349	366	279	309	175	276	208	345	.....	333	163	253	2,072
Means	203	242	255	118	184	272	31	211	172	161	166	331	366	208	212	140	222	176	148	182	303	182	320	1,334
Departures	−8	+40	+4	−43	+11	+17	−27	−11	−10	−25	−29	+6	+72	−12	.....	−26	+10	+30	−28	−38	+27	.....	.....	.....
Feb. 12	328	305	214	276	218	318	70	141	265	94	185	328	358	292	287	150	251	197	218	306	356	198	244	2,028
Feb. 13	27	175	248	131	43	341	88	317	101	45	151	243	386	110	238	76	79	59	61	129	271	319	166	907
Feb. 14	224	286	295	150	118	94	94	346	84	344	146	223	106	93	136	85	80	227	112	102	272	318	193	798
Feb. 15	276	116	202	37	100	361	38	360	63	384	193	336	142	109	297	172	95	307	126	108	402	340	495	516
Feb. 16	162	295	95	277	237	390	66	14	235	103	347	354	238	240	183	308	196	392	276	224	338	98	475	1,544
Feb. 17	28	398	207	259	67	383	40	349	171	24	112	373	174	196	257	250	128	144	319	170	470	136	196	1,393
Feb. 18	364	403	94	224	297	345	34	308	294	395	112	317	462	348	306	313	339	401	286	366	198	78	148	1,885
Means	201	283	194	189	154	319	62	262	173	198	178	311	267	198	243	193	167	247	200	201	330	212	274	1,296
Departures	−27	+55	−65	−14	−41	+24	−9	+21	−23	−7	−78	−9	−42	−42	.....	+6	−85	+77	−21	−43	+4	.....	.....	.....
Feb. 19	406	238	59	264	331	372	34	120	336	270	162	317	261	377	368	190	344	413	374	387	628	324	506	2,104
Feb. 20	248	213	80	85	133	368	86	126	180	97	236	386	423	238	247	170	257	138	106	311	80	148	350	1,380
Feb. 21	54	58	70	33	211	407	46	127	283	55	363	434	511	310	355	258	.....	112	49	290	432	334	521	1,806
Feb. 22	77	163	335	18	20	411	61	200	28	88	189	444	474	41	57	192	31	207	52	38	408	409	442	287
Feb. 23	404	333	385	140	123	426	24	418	93	414	217	415	455	99	189	124	68	185	252	85	446	237	545	836
Feb. 24	441	353	94	305	296	423	44	380	267	418	306	352	251	272	341	109	284	348	395	379	453	140	172	2,067
Feb. 25	301	133	106	142	244	438	48	69	365	209	398	426	480	393	407	226	372	221	150	411	268	149	517	2,561
Means	276	213	161	141	194	406	49	206	222	222	267	396	408	247	281	181	226	232	197	272	388	249	436	1,577
Departures	+11	−40	−121	−75	−33	+142	−41	−37	+13	−7	+9	+52	+99	−24	.....	−38	−35	+32	−41	−2	+79	.....	.....	.....
Accumulated Departures on Feb. 25, 1945																								
	0	+574	−3,624	−1,078	+364	+742	−728	−483	+434	−1,365	−1,673	−847	+1,022	−273	.....	+371	−938	+2,121	+203	+98	+21	.....	.....	.....

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR FEBRUARY 1945

By LUCY T. DAY

[Equatorial Division, U. S. Naval Observatory]

Communicated by Commodore J. F. HELLWEG, U. S. N. (Ret.) Superintendent, U. S. Naval Observatory.] All measurements and spot counts were made at the Naval Observatory from plates taken at the observatories indicated. Difference in longitude is measured from the central meridian, positive toward the west. Latitude is positive toward the north. Areas are corrected for foreshortening and expressed in millionths of Sun's hemisphere. For each day, under longitude, latitude, areas of spot or group, and spot count are included assumed longitude of center of the disk, assumed latitude of center of the disk, total area of spots and groups and total spot count.

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1945	h m		°	°	°	°				
Feb. 1	10 35	7721	−80	49	−22	80	97	3	F	U. S. Naval.
		7721	−80	49	−24	80	48	1		
				(129)	(−6)		145	4		
2	10 44	7721	−69	46	−22	69	109	2	F	Do.
				(115)	(−6)		109	2		
3	11 48	7721	−54	48	−22	55	36	1	F	Do.
		7721	−50	52	−23	52	24	9		
		7720	−19	83	−18	22	24	7		
		7720	−15	87	−17	18	48	2		
				(102)	(−6)		132	19		
4	16 0	7721	−39	47	−22	41	24	1	P	Mt. Wilson.
		7720	+1	87	−18	12	36	1		
				(86)	(−6)		60	2		

See footnotes at end of table.

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR FEBRUARY 1945—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1945	h m		°	°	°	°				
Feb. 5	14 0	7721	−27	47	−22	31	36	1	P	U. S. Naval.
		7720	+9	83	−18	15	24	1		
		7720	+13	87	−17	17	48	4		
				(74)	(−6)		108	6		
6	10 14	7721	−15	48	−22	22	36	1	F	Do.
		(*)	−13	50	−15	15	12	1		
		7720	+25	88	−17	27	36	1		
				(63)	(−6)		84	3		
7	10 34	7721	−2	48	−22	17	36	1	F	Do.
				(50)	(−6)		36	1		
8	12 50	7721	+12	47	−22	19	48	2	F	Do.
				(35)	(−7)		48	2		
9	10 46	7721	+25	48	−23	28	24	1	F	Do.
				(23)	(−7)		24	1		
10	10 58			No	spots				†	Mt. Wilson.
11	11 45			No	spots				†	Do.
12	10 50			No	spots				†	Do.
13	11 1	7723	−71	259	+23	76	194	1	G	Do.
				(330)	(−7)		194	1		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR FEBRUARY 1945—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1945	h m		°	°	°	°				
Feb. 14	11 3	7723	−68	249	+23	73	194	2	F	U. S. Naval.
		7723	−59	258	+22	64	170	1		
				(317)	(−7)		364	3		
15	10 57	7723	−55	249	+25	62	97	1	F	Do.
		7723	−51	253	+24	59	73	1		
		7723	−47	257	+23	55	24	1		
		7723	−45	259	+24	54	145	1		
				(304)	(−7)		339	4		
16	12 45	7723	−42	248	+25	52	48	1	F	Do.
		7723	−39	251	+24	50	24	1		
		7723	−34	256	+23	45	12	1		
		7723	−32	258	+24	44	97	1		
				(290)	(−7)		181	4		
17	10 44	7723	−29	249	+24	43	61	2	VG	Mt. Wilson.
		7723	−21	257	+22	37	12	2		
		7723	−18	260	+22	35	73	2		
				(278)	(−7)		146	6		
18	10 34	7723	−16	249	+23	35	24	1	F	U. S. Naval.
		7723	−7	258	+23	32	145	7		
				(265)	(−7)		169	8		
19	10 48	7723	+7	258	+23	32	121	6	F	Do.
		(*)	+11	262	−19	17	12	2		
		7724	+23	274	−30	32	24	3		
				(251)	(−7)		157	11		
20	10 23	7723	+20	259	+23	36	73	2	P	Do.
		7724	+36	275	−29	41	48	2		
				(239)	(−7)		121	4		
21	13 0			No	spots				†	Mt. Wilson.
22	11 0			No	spots				†	Do.
23	11 51	7725	−80	118	−15	80	12	1	F	U. S. Naval.
		7725	−74	124	−18	75	145	1		
				(198)	(−7)		157	2		
24	10 56	7725	−65	121	−15	65	36	1	F	Do.
		7725	−62	124	−16	62	24	2		
		7725	−58	128	−17	58	145	1		
				(186)	(−7)		205	4		
25	12 12	7725	−51	121	−16	51	24	4	G	Mt. Wilson.
		7725	−51	121	−19	51	12	2		
		7725	−46	126	−17	47	24	2		
		7725	−44	128	−18	45	16	2		
		7725	−42	130	−17	43	97	2		
		7726	−1	171	−31	24	12	2		
				(172)	(−7)		185	14		
26	11 1	7725	−38	121	−16	39	24	1	F	Do.
		7725	−37	122	−18	38	24	2		
		7725	−29	130	−17	30	73	2		
		7726	+13	172	−32	27	36	1		
		7726	+21	180	−31	31	12	1		
				(159)	(−7)		169	7		
27	13 46	7725	−17	127	−15	19	36	1	F	U. S. Naval.
		7725	−17	127	−18	21	36	2		
		7725	−15	129	−16	17	24	4		
		7725	−12	132	−16	15	48	1		
				(144)	(−7)		144	8		

Mean daily area for 27 days=121

*Not numbered.
†Data taken from Mount Wilson charts.
VG=very good: G=Good; F=fair; P=poor.

PROVISIONAL RELATIVE SUNSPOT NUMBERS

[Based on observations at Zurich except as indicated by an asterisk. Data furnished through the courtesy of Prof. W. Brunner, Swiss Federal Observatory, Zurich, Switzerland.]

Date	Relative numbers	Date	Relative numbers	Date	Relative numbers
December 1944		*December 1944*		*December 1944*	
1	*0	11		21	
2	0	12	32	22	*Mc* 49
3	0	13	*d* *53	23	
4	*0	14	*b* *36	24	41
5	7	15	39	25	*38
6	*Ec* 16	16	32	26	31
7	16	17	31	27	*a* 33
8	*d* --	18	*Wc* 52	28	24
9	25	19	*a* 40	29	17
10	44	20	*d* --	30	8
				31	*9

Mean, 26 days=25.9

January 1945		*January 1945*		*January 1945*	
1	*0	11	*d* *27	21	*27
2	0	12	*a* 23	22	*36
3	0	13	20	23	*a* 23
4	0	14	16	24	23
5	14	15	*18	25	12
6	*d* *9	16	*a* 15	26	
7	29	17	14	27	*Mc* --
8	23	18	*d* 23	28	*22
9	17	19	17	29	17
10	17	20	16	30	*13
				31	11

Mean, 29 days=16.6

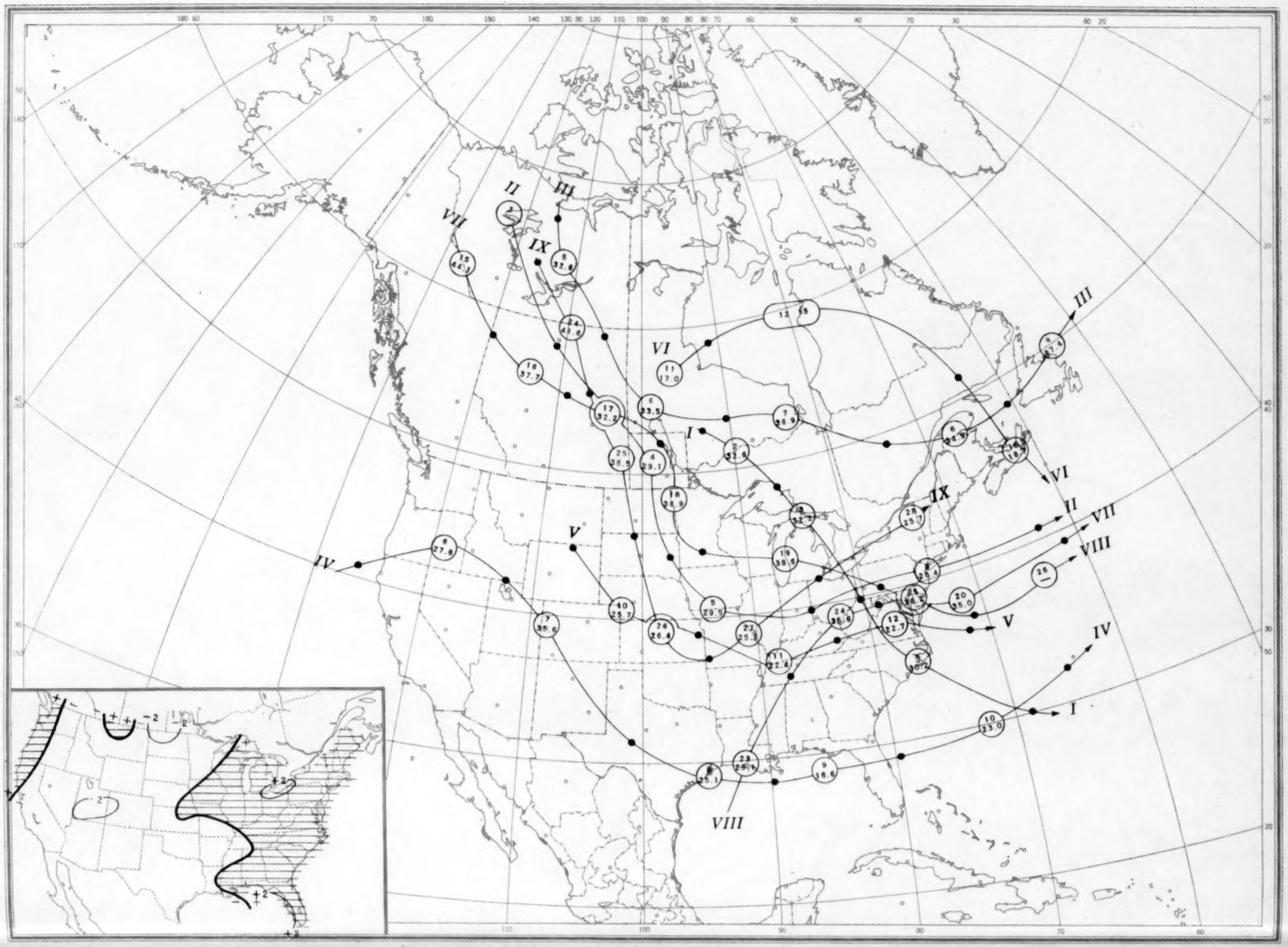
* Observed at Locarno.
a Passage of an average sized group through the central meridian.
b Passage of a large group through the central meridian.
c New formation of a group developing into a middle sized or large center of activity; E, on the eastern part of the Sun's disc; W, on the western part; M, in the central circle zone.
d Entrance of a large or average sized center of activity on the east limb.

Chart I.—Departure (°F.) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, February 1945

Chart I. Departure (°F.) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, February 1945

Chart II. Tracks of Centers of Anticyclones, February 1945. (Inset) Departure of Monthly Mean Pressure from Normal

(Plotted by D. R. Harris)



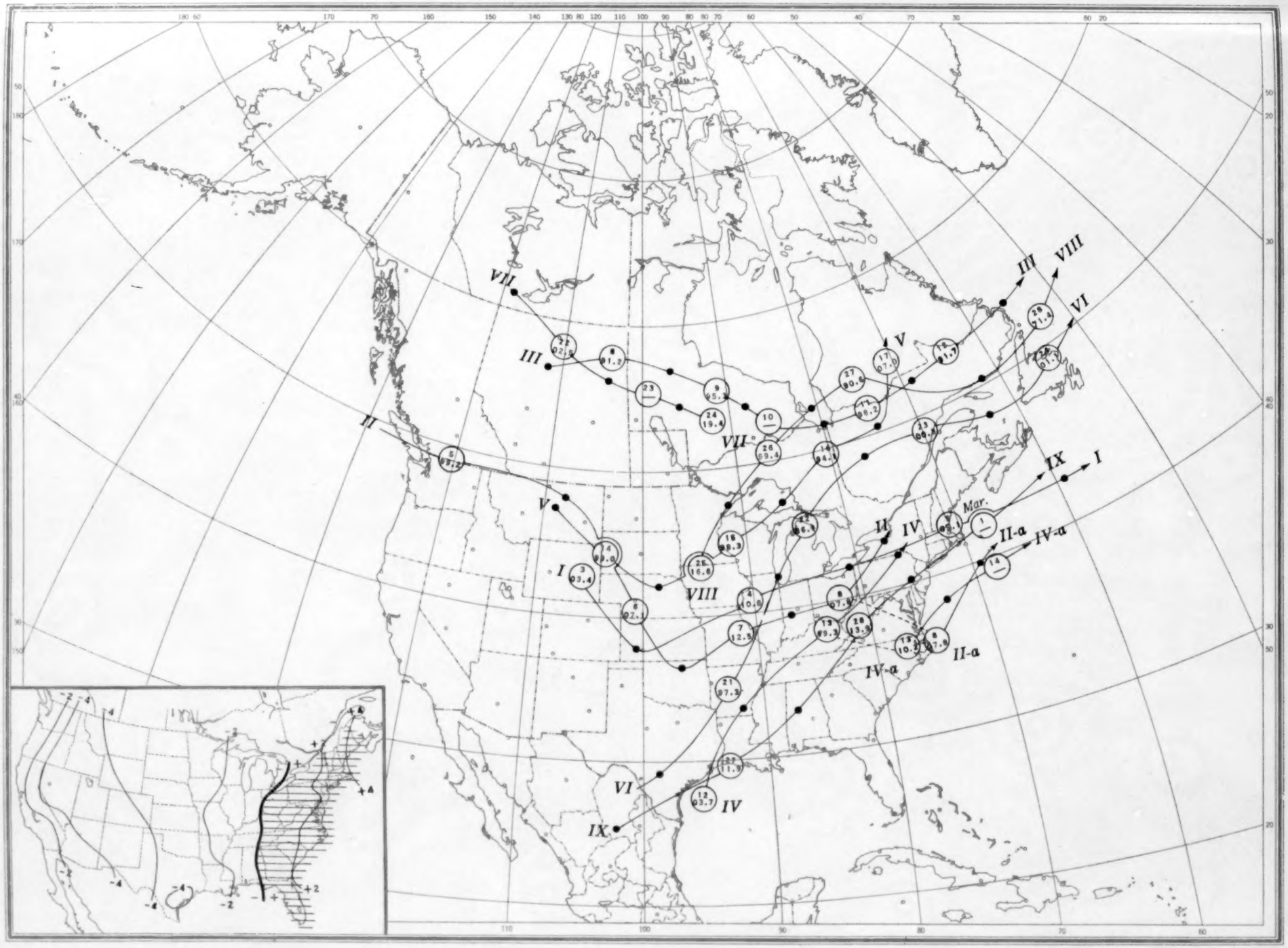
Circle indicates position of anticyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of anticyclone at 7:30 p. m. (75th meridian time)

Chart III. Tracks of Centers of Cyclones, February 1945. (Inset) Change in Mean Pressure from Preceding Month

Circle indicates position of anticyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of anticyclone at 7:30 p. m. (75th meridian time)

Chart III. Tracks of Centers of Cyclones, February 1945. (Inset) Change in Mean Pressure from Preceding Month

(Plotted by D. R. Harris)



Circle indicates position of cyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of cyclone at 7:30 p. m. (75th meridian time)

Chart IV. Percentage of Clear Sky Between Sunrise and Sunset, February 1945

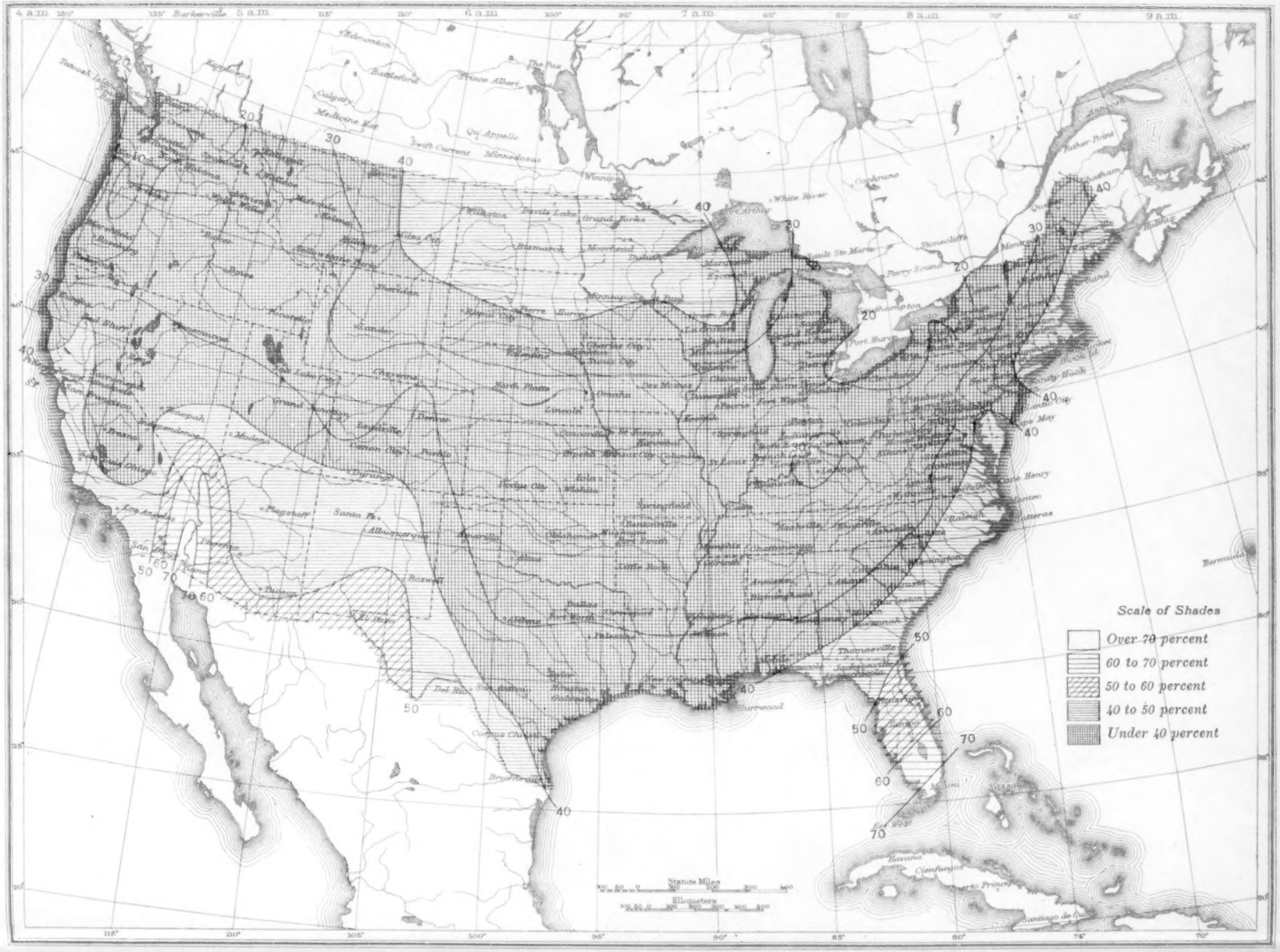


Chart V. Total Precipitation, Inches, February 1945. (Inset) Departure of Precipitation from Normal

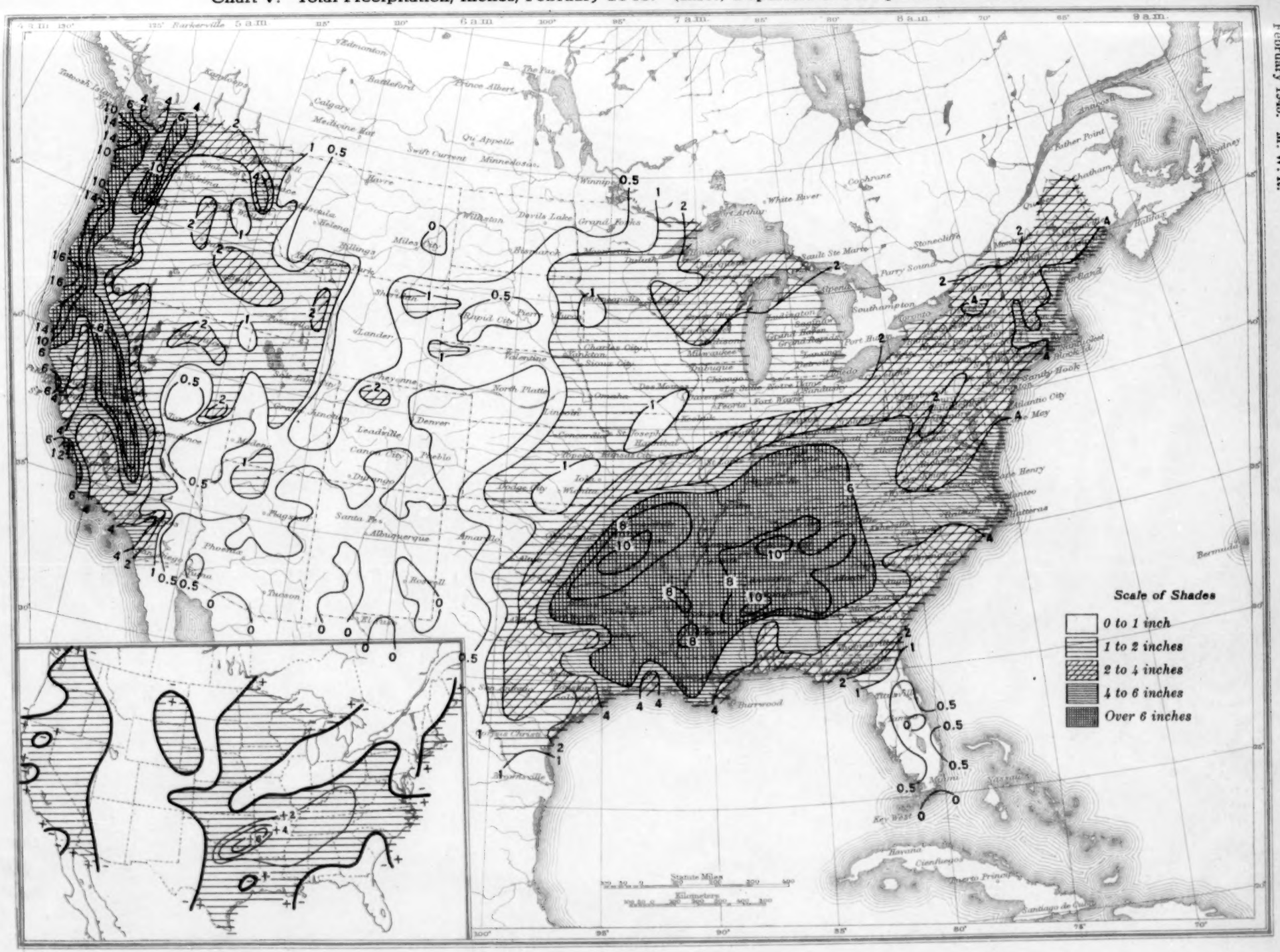


Chart VI. Isobars(mb), at Sea Level and Isotherms °F at Surface; Prevailing Winds, February 1945

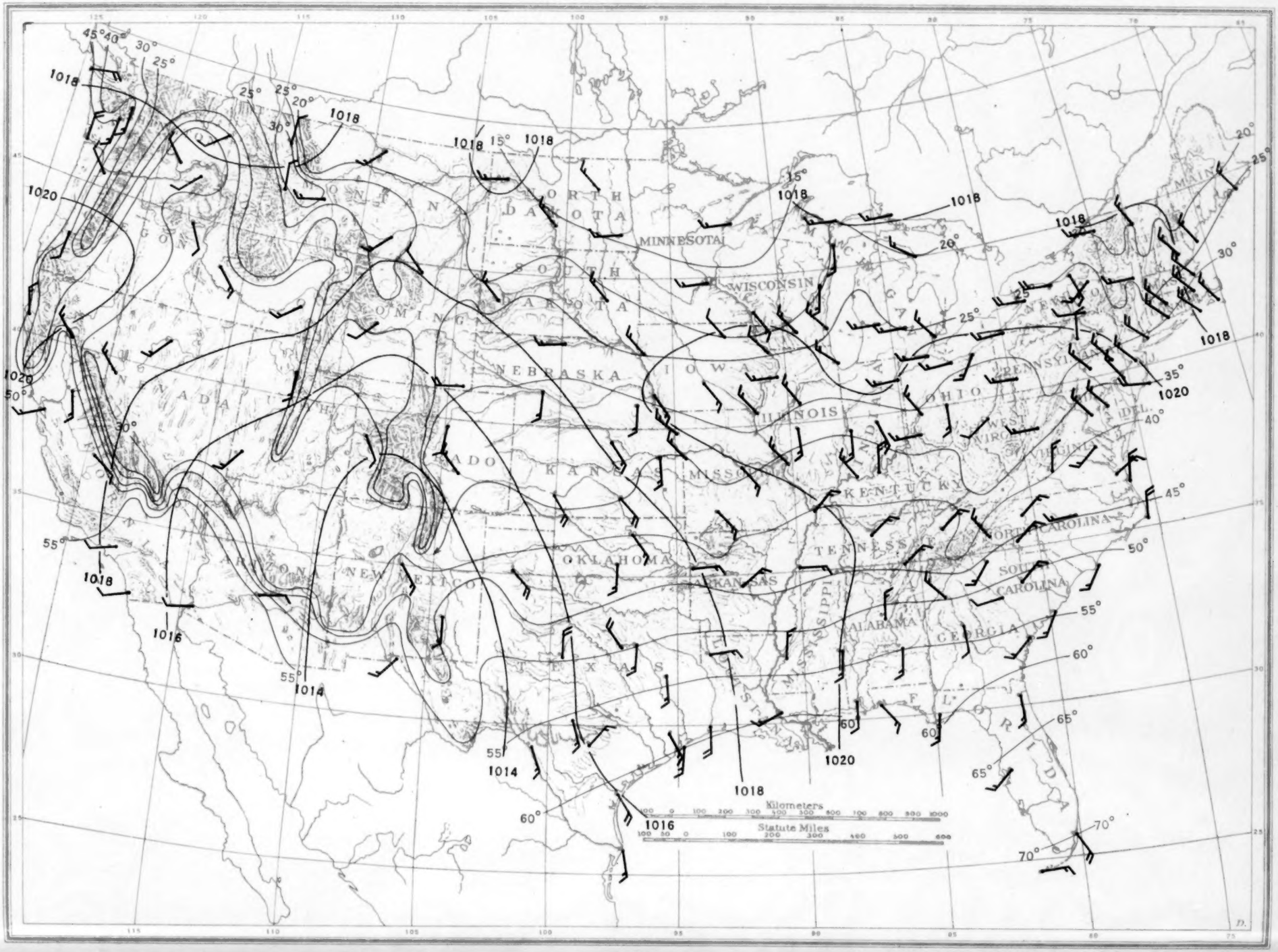


Chart VII. Total Snowfall, Inches, February 1945. (Inset) Depth of Snow on the Ground at 7:30 p. m., Monday, February 26, 1945

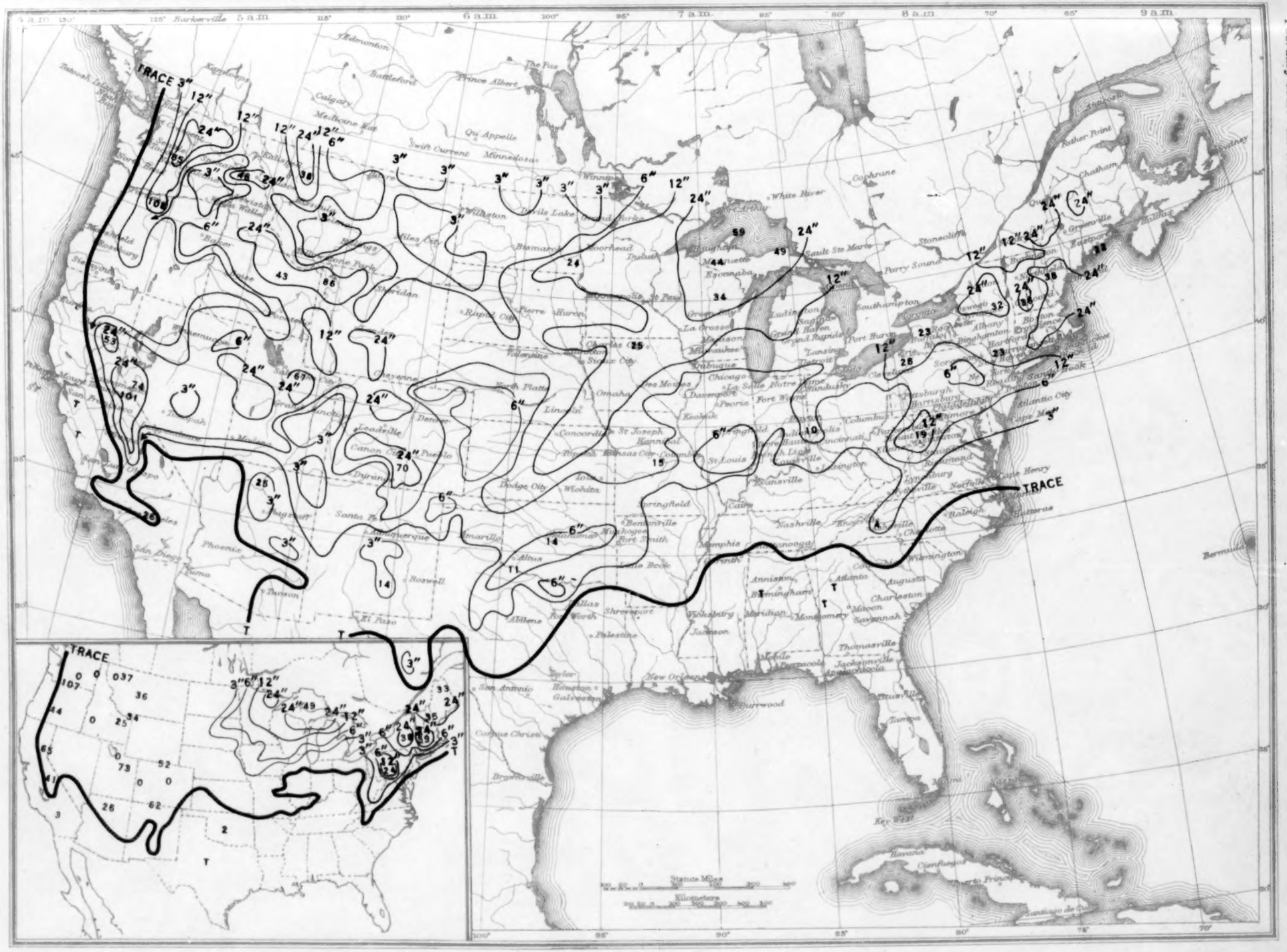


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) February 1945

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) February 1945

Isobars and isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) February 1945

Isobars and isotherms based on radiosonde observations 11:00 p. m. at (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

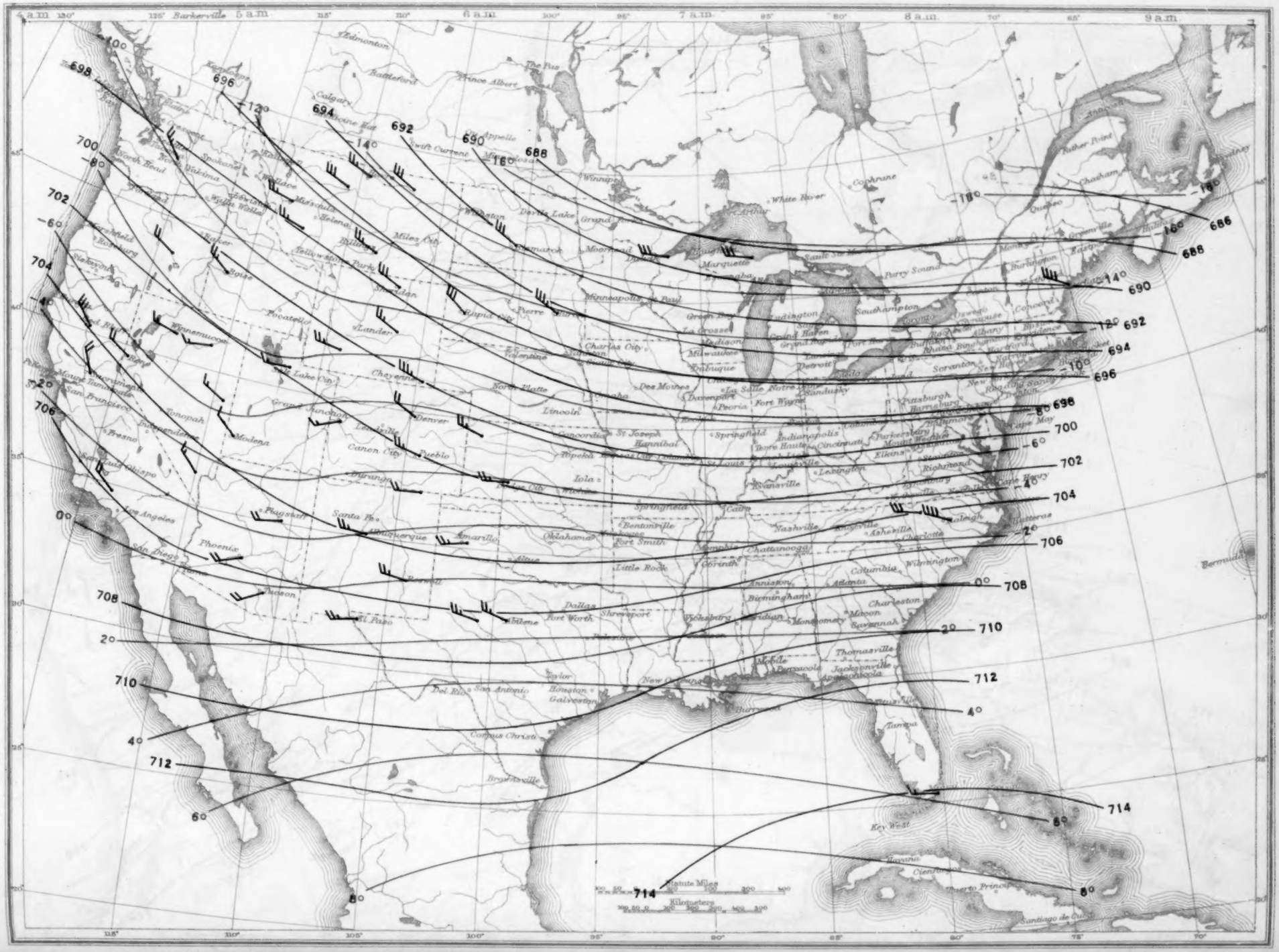

4 a.m.
5 a.m.
6 a.m.
7 a.m.
8 a.m.
9 a.m.
Barkerville
Edmonton
Battleford
Prince Albert
The Pas
Calgary
Medicine Hat
Swift Current
Appelle
Winnipeg
White River
Cochrane
Sault Ste. Marie
Parry Sound
Quebec
Anticosti
Father Point
Chatham
Sydney
Kamloops
Spokane
Wallace
Missoula
Helena
Miles City
Billings
Yellowstone Park
Boise
Pocatello
Lander
Cheyenne
Pierre
Rapid City
Minneapolis
St. Paul
Green Bay
La Crosse
Madison
Milwaukee
Dubuque
Charles City
Des Moines
Davenport
Peoria
La Salle
Notre Dame
Fort Wayne
Sandusky
Detroit
Toledo
Buffalo
Scranton
Albany
Boston
Providence
Portland
Concord
Burlington
Montreal
Ottawa
Toronto
Kingston
Oswego
Rochester
Syracuse
Utica
Binghamton
Harrisburg
Pittsburgh
Philadelphia
Atlantic City
Cape May
New York
Baltimore
Washington
Richmond
Norfolk
Cape Hatteras
Raleigh
Wilmington
Columbia
Charleston
Savannah
Jacksonville
Tallahassee
Apalachicola
Pensacola
Mobile
Thomasville
Tampa
Key West
Havana
Cienfuegos
Puerto Principe
Santiago de Cuba
Bermuda
Lincoln
North Platte
Omaha
Denver
Grand Junction
Concordia
St. Joseph
Hannibal
Springfield
Topeka
Kansas City
St. Louis
Indianapolis
Terre Haute
Cincinnati
Louisville
Lexington
Evansville
Mount Weather
Elkins
Parkersburg
Huntington
Roanoke
Lincoln
Grand Island
Colorado Springs
Canon City
Pueblo
Trinidad
Las Animas
Garden City
Dodge City
Wichita
Iola
Springfield
Bentonville
Fort Smith
Oklahoma
Amarillo
Albuquerque
Santa Fe
Flagstaff
Phoenix
Tucson
Yuma
Needles
Los Angeles
San Diego
Fresno
San Francisco
Sacramento
Red Bluff
Reno
Winnemucca
Elko
Ely
Tonopah
Goldfield
Las Vegas
Modena
Independence
Fort Worth
Dallas
Shreveport
Meridian
Montgomery
Birmingham
Tuscaloosa
Corinth
Memphis
Little Rock
Chattanooga
Nashville
Asheville
Charlotte
Greenville
Atlanta
Anniston
Columbus
Macon
Albany
Abilene
El Paso
Del Rio
San Antonio
Houston
Galveston
Taylor
Corpus Christi
Brownsville
New Orleans
Gulfport
Biloxi
Jackson
Vicksburg
Monroe
Shreveport
Natchez
Baton Rouge
Lake Charles
Port Arthur
Beaumont
Corsicana
Waco
Temple
Austin
Victoria
Laredo
Eagle Pass
Marfa
Midland
Big Spring
Abilene
Wichita Falls
Childress
Amarillo
Clayton
Tucumcari
Roswell
Carlsbad
Alamogordo
Albuquerque
Gallup
Winslow
Prescott
Yuma
Needles
Bishop
Mojave
Tonopah
Ely
Elko
Winnemucca
Reno
Red Bluff
Sacramento
San Francisco
Fresno
Bakersfield
Santa Barbara
Los Angeles
San Diego
Phoenix
Tucson
Yuma
Flagstaff
Santa Fe
Albuquerque
Amarillo
Clayton
Tucumcari
Roswell
Carlsbad
Alamogordo

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) February 1945

Isobars and isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) February 1945

Isobars and isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).